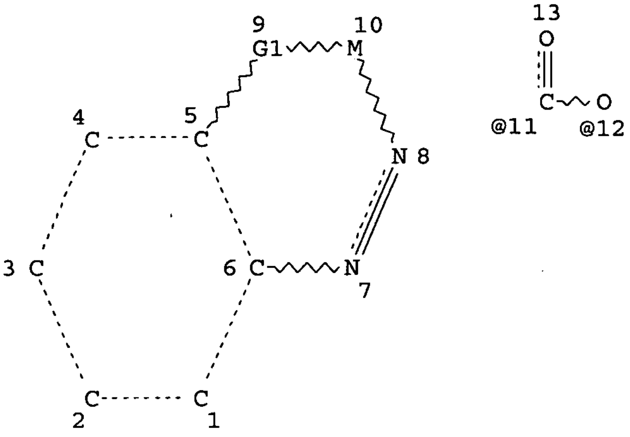
10-768-291

44

```
=> d que stat l8
L6                STR
```



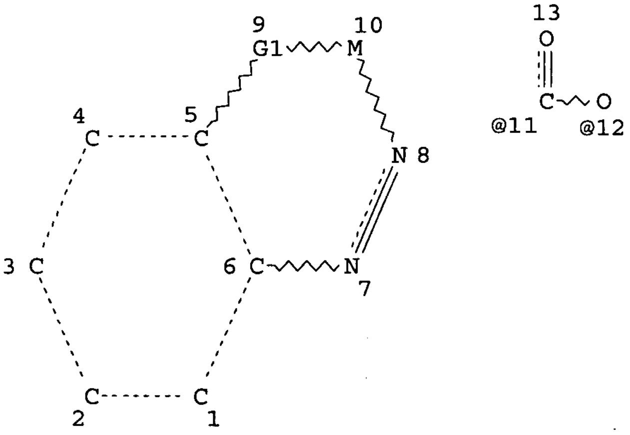
```
VAR G1=O/S/SE/P/N/11/12
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
MLEVEL  IS CLASS  AT   7  8 10
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  13

STEREO ATTRIBUTES: NONE
L8          19568 SEA FILE=REGISTRY SSS FUL L6

100.0% PROCESSED  136021 ITERATIONS                          19568 ANSWERS
SEARCH TIME: 00.00.01


=> d que stat l16
L6                STR
```



```
VAR G1=O/S/SE/P/N/11/12
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
MLEVEL  IS CLASS  AT   7  8 10
```

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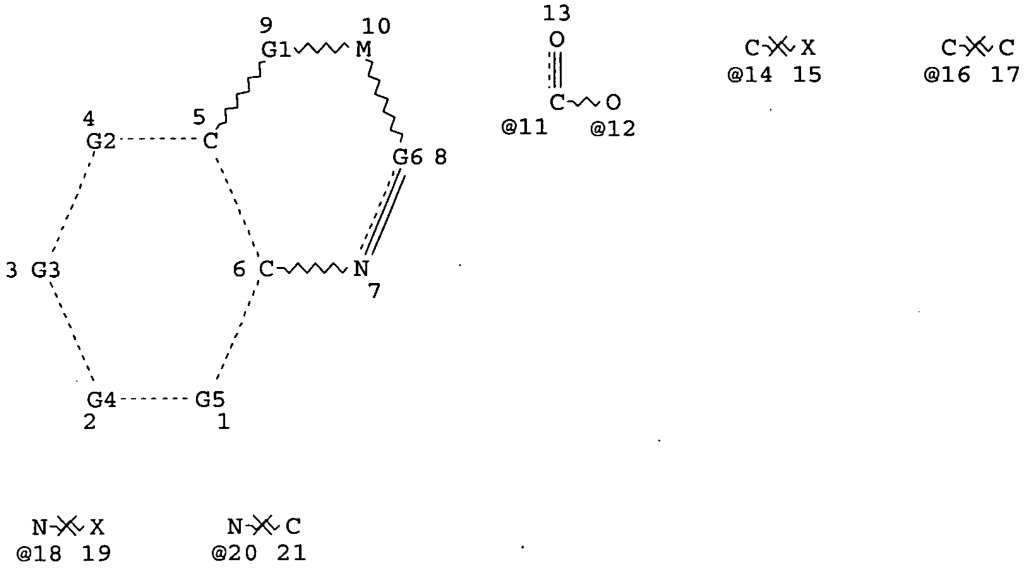
```
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  13

STEREO ATTRIBUTES: NONE
L8          19568 SEA FILE=REGISTRY SSS FUL L6
L14               STR
```



```
VAR G1=O/S/SE/P/N/11/12
VAR G2=CH/14/16
VAR G3=CH/14/16
VAR G4=CH/14/16
VAR G5=CH/14/16
VAR G6=NH/18/20
NODE ATTRIBUTES:
NSPEC   IS RC     AT  15
NSPEC   IS RC     AT  17
NSPEC   IS RC     AT  19
NSPEC   IS RC     AT  21
DEFAULT MLEVEL IS ATOM
MLEVEL  IS CLASS  AT   7 10
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  21

STEREO ATTRIBUTES: NONE
L16          7180 SEA FILE=REGISTRY SUB=L8 SSS FUL L14

100.0% PROCESSED   19568 ITERATIONS                        7180 ANSWERS
SEARCH TIME: 00.00.01


=> d que 143
L6                STR
```

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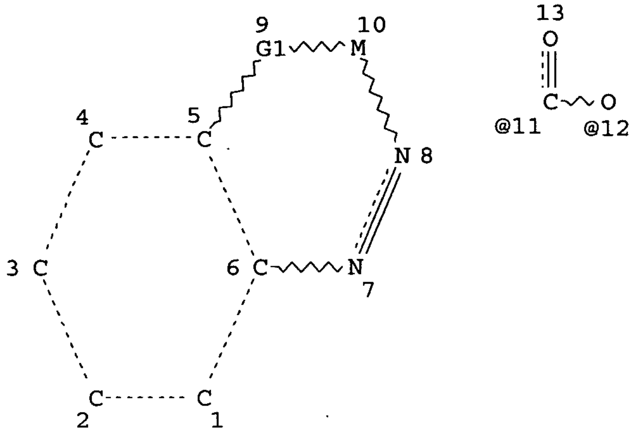
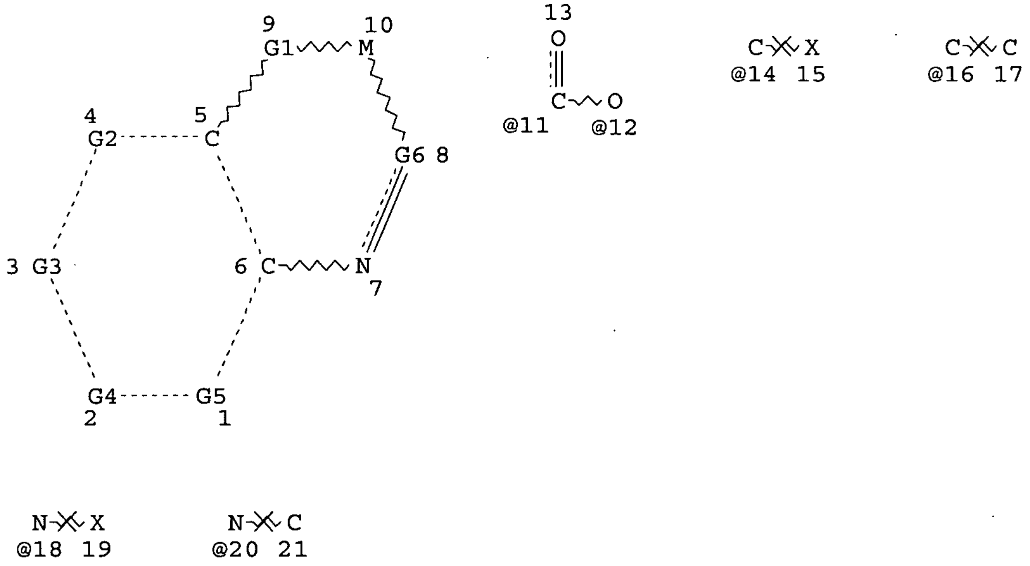


```
VAR G1=O/S/SE/P/N/11/12
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
MLEVEL  IS CLASS  AT   7  8 10
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  13

STEREO ATTRIBUTES: NONE
L8        19568 SEA FILE=REGISTRY SSS FUL L6
L10       18911 SEA FILE=REGISTRY ABB=ON  PLU=ON  L8 AND (B4 OR B5 OR B6 OR B7
                OR B8 OR B1 OR B2)/PG
L11        4906 SEA FILE=REGISTRY ABB=ON  PLU=ON  L8 AND B8/PG
L14             STR
```



```
VAR G1=O/S/SE/P/N/11/12
VAR G2=CH/14/16
VAR G3=CH/14/16
VAR G4=CH/14/16
VAR G5=CH/14/16
```

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```
VAR G6=NH/18/20
NODE ATTRIBUTES:
NSPEC   IS RC     AT  15
NSPEC   IS RC     AT  17
NSPEC   IS RC     AT  19
NSPEC   IS RC     AT  21
DEFAULT MLEVEL IS ATOM
MLEVEL  IS CLASS  AT   7 10
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  21

STEREO ATTRIBUTES: NONE
L16         7180 SEA FILE=REGISTRY SUB=L8 SSS FUL L14
L17         2217 SEA FILE=REGISTRY ABB=ON  PLU=ON  L16 AND L11
L20          628 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17
L21            6 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17 (L) CAT/RL
L22           11 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17 (L) ?CATALY?
L23           26 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17 (L) ?POLYMER?
L24           35 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L21 OR L22 OR L23)
L25           10 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L20 AND (POLYMER?)/SC,SX
L26           41 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L24 OR L25)
L27         6858 SEA FILE=REGISTRY ABB=ON  PLU=ON  L16 AND L10
L28         4641 SEA FILE=REGISTRY ABB=ON  PLU=ON  L27 NOT L17
L30            7 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L28 (L) CAT/RL
L31           70 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L28 (L) ?POLYMER?
L32           10 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L28 (L) ?CATALY?
L33           78 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L30 OR L31 OR L32)
L34           71 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L33 NOT L26
L35           26 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L34 AND POLYMER?/SC,SX
L36           67 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L35 OR L26
L41           59 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L36 AND ?POLYMER?
L42           10 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L41 AND ?CATALY?
L43           59 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L41 OR L42)


=> d his l48

     (FILE 'USPATFULL, USPAT2, CAOLD, TOXCENTER, CASREACT' ENTERED AT 13:57:12
     ON 27 JUL 2005)
L48           26 S L46 AND L47

=> d que nos l48
L6               STR
L8         19568 SEA FILE=REGISTRY SSS FUL L6
L11         4906 SEA FILE=REGISTRY ABB=ON  PLU=ON  L8 AND B8/PG
L14              STR
L16         7180 SEA FILE=REGISTRY SUB=L8 SSS FUL L14
L17         2217 SEA FILE=REGISTRY ABB=ON  PLU=ON  L16 AND L11
L44          201 SEA L17
L45          188 DUP REM L44 (13 DUPLICATES REMOVED)
L46           32 SEA L45 AND ?CATALY?/BI,IT,ST,CC,CT
L47           81 SEA L45 AND ?POLYMER?/BI,IT,ST,CC,CT
L48           26 SEA L46 AND L47


=> d que l53
L6               STR
```

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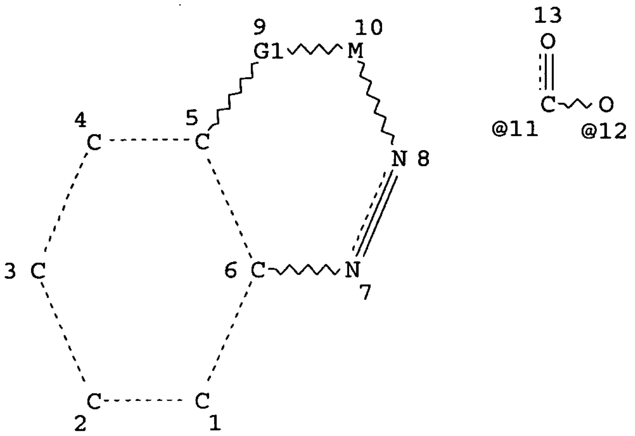
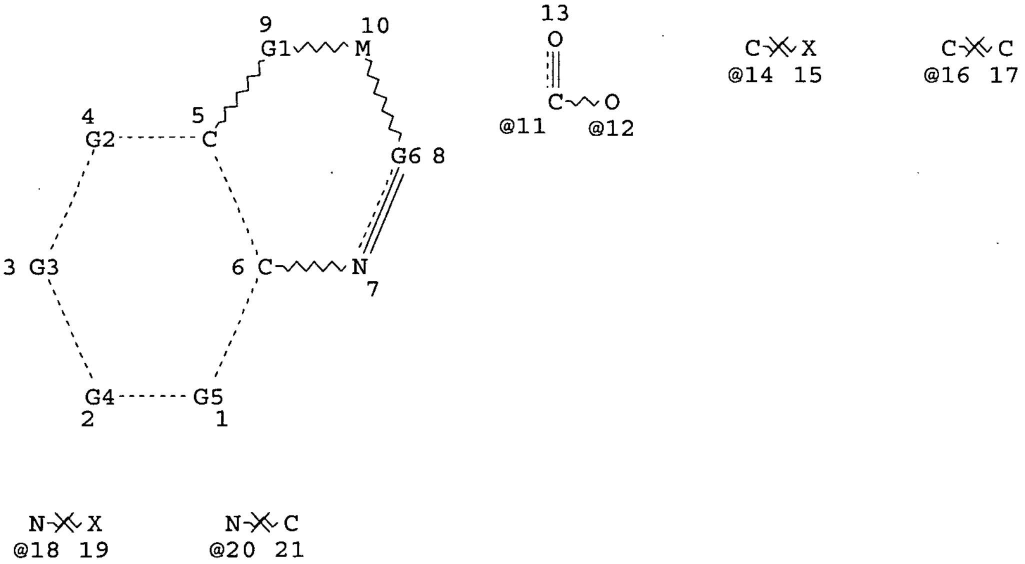


```
VAR G1=O/S/SE/P/N/11/12
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
MLEVEL  IS CLASS  AT   7  8 10
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  13

STEREO ATTRIBUTES: NONE
L8         19568 SEA FILE=REGISTRY SSS FUL L6
L11         4906 SEA FILE=REGISTRY ABB=ON  PLU=ON  L8 AND B8/PG
L14              STR
```



```
VAR G1=O/S/SE/P/N/11/12
VAR G2=CH/14/16
VAR G3=CH/14/16
VAR G4=CH/14/16
VAR G5=CH/14/16
VAR G6=NH/18/20
NODE ATTRIBUTES:
```

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```
NSPEC   IS RC     AT  15
NSPEC   IS RC     AT  17
NSPEC   IS RC     AT  19
NSPEC   IS RC     AT  21
DEFAULT MLEVEL IS ATOM
MLEVEL  IS CLASS  AT   7 10
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  21

STEREO ATTRIBUTES: NONE
L16        7180 SEA FILE=REGISTRY SUB=L8 SSS FUL L14
L17        2217 SEA FILE=REGISTRY ABB=ON  PLU=ON  L16 AND L11
L49           0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 AND MEDLINE/LC
L50           0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 AND BIOSIS/LC
L51           0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 AND EMBASE/LC
L52           0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 AND CANCERLIT/LC
L53           0 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L49 OR L50 OR L51 OR L52)


=> d his l60

     (FILE 'PASCAL, JICST-EPLUS, SCISEARCH, APOLLIT' ENTERED AT 14:09:19 ON 27
     JUL 2005)
L60          10 DUP REM L59 (6 DUPLICATES REMOVED)

=> d que l60
L54             QUE  ABB=ON  PLU=ON  NICKEL OR NI OR PALLADIUM OR PD OR P
                LATINUM OR PT
L55         148 SEA L54 (5A) AZO
L56          43 SEA ((TRANSITION OR (D(1W) BLOCK)) (2A) (METAL OR ELEMENT))
                (5A) AZO
L57           9 SEA (L55 OR L56) (10A) ?CATALY?
L58           7 SEA (L55 OR L56) (10A) ?POLYMER?
L59          16 SEA (L57 OR L58)
L60          10 DUP REM L59 (6 DUPLICATES REMOVED)


=> d que l78
L61        3995 SEA FILE=WPIX ABB=ON  PLU=ON  ((K531 OR K534) (P) (A42? OR
                A430 OR A500 OR A54? OR A600 OR A67?))/M0,M1,M2,M3,M4,M5,M6
L62        1350 SEA FILE=WPIX ABB=ON  PLU=ON  C09B045?/IPC
L63         986 SEA FILE=WPIX ABB=ON  PLU=ON  L61 AND L62
L65        1642 SEA FILE=WPIX ABB=ON  PLU=ON  B01J031-12/IPC
L66       12140 SEA FILE=WPIX ABB=ON  PLU=ON  A02-A06/MC
L67           1 SEA FILE=WPIX ABB=ON  PLU=ON  L63 AND (L65 OR L66)
L68        2016 SEA FILE=WPIX ABB=ON  PLU=ON  (NICKEL/BIX OR NI/BIX OR
                PALLADIUM/BIX OR PD/BIX OR PLATINUM/BIX OR PT/BIX) (10A)
                AZO?/BIX
L74          30 SEA FILE=WPIX ABB=ON  PLU=ON  (((TRANSITION OR (D(1W) BLOCK))
                (2A) (METAL OR ELEMENT))(5A) AZO)/BIX
L75          54 SEA FILE=WPIX ABB=ON  PLU=ON  (L68 OR L74) AND L63
L76          12 SEA FILE=WPIX ABB=ON  PLU=ON  L75 AND (?CATALY? OR ?POLYMER?)/B
                IX
L78          12 SEA FILE=WPIX ABB=ON  PLU=ON  L67 OR L76


=> d his l83
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     (FILE 'HCAPLUS, MEDLINE, BIOSIS, PASCAL, APOLLIT, JICST-EPLUS, EMBASE,
     SCISEARCH, WPIX, CONF, CONFSCI' ENTERED AT 15:19:10 ON 27 JUL 2005)
L83          13 S L81 AND L82

=> d que l83
L79        2617 SEA WEISS, T?/AU
L80        1246 DUP REM L79 (1371 DUPLICATES REMOVED)
L81          29 SEA L80 AND ?CATALY?
L82          42 SEA L80 AND ?POLYMER?
L83          13 SEA L81 AND L82


=> d his ful

     (FILE 'HOME' ENTERED AT 13:01:54 ON 27 JUL 2005)

     FILE 'HCAPLUS' ENTERED AT 13:02:07 ON 27 JUL 2005
L1            1 SEA ABB=ON  PLU=ON  US2004-768291/APPS
                SAVE TEMP L1 NWA291HCAAPP/A

     FILE 'STNGUIDE' ENTERED AT 13:02:30 ON 27 JUL 2005

     FILE 'HCAPLUS' ENTERED AT 13:02:39 ON 27 JUL 2005
                D IALL

     FILE 'STNGUIDE' ENTERED AT 13:02:40 ON 27 JUL 2005

     FILE 'STNGUIDE' ENTERED AT 13:02:47 ON 27 JUL 2005

     FILE 'WPIX' ENTERED AT 13:04:12 ON 27 JUL 2005
L2            1 SEA ABB=ON  PLU=ON  US2004-768291/APPS
                SAVE TEMP L2 NWA291REGAPP/A
                D IALL
                D CMC

     FILE 'STNGUIDE' ENTERED AT 13:04:50 ON 27 JUL 2005

     FILE 'REGISTRY' ENTERED AT 13:06:03 ON 27 JUL 2005

     FILE 'HCAPLUS' ENTERED AT 13:06:06 ON 27 JUL 2005
L3              TRA L1 1- RN :        19 TERMS

     FILE 'REGISTRY' ENTERED AT 13:06:09 ON 27 JUL 2005
L4           19 SEA ABB=ON  PLU=ON  L3
                SAVE TEMP L4 NWA291REGAPP/A

     FILE 'WPIX' ENTERED AT 13:06:35 ON 27 JUL 2005
                SAVE TEMP L2 NWA291WPIAPP/A

     FILE 'STNGUIDE' ENTERED AT 13:06:50 ON 27 JUL 2005
                D SAVED

     FILE 'REGISTRY' ENTERED AT 13:07:22 ON 27 JUL 2005
                D SCAN

     FILE 'STNGUIDE' ENTERED AT 13:07:35 ON 27 JUL 2005

     FILE 'LREGISTRY' ENTERED AT 13:13:04 ON 27 JUL 2005
L5              STRUCTURE UPLOADED
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L6              STR L5

     FILE 'REGISTRY' ENTERED AT 13:16:20 ON 27 JUL 2005
                D SCAN L4
L7            50 SEA SSS SAM L6
                D QUE STAT
L8         19568 SEA SSS FUL L6
                SAVE TEMP L8 NWA291PSET1/A
L9             7 SEA ABB=ON  PLU=ON  L8 AND L4
                D SCAN

     FILE 'STNGUIDE' ENTERED AT 13:19:16 ON 27 JUL 2005
                D SAVED

     FILE 'REGISTRY' ENTERED AT 13:20:52 ON 27 JUL 2005
L10        18911 SEA ABB=ON  PLU=ON  L8 AND (B4 OR B5 OR B6 OR B7 OR B8 OR B1
                OR B2)/PG
                SAVE TEMP L10 NWA291RSET1/A
L11         4906 SEA ABB=ON  PLU=ON  L8 AND B8/PG
                SAVE TEMP L11 NWA291RSET2/A

     FILE 'STNGUIDE' ENTERED AT 13:23:07 ON 27 JUL 2005
                D SAVED

     FILE 'REGISTRY' ENTERED AT 13:23:54 ON 27 JUL 2005
L12            7 SEA ABB=ON  PLU=ON  L4 AND L11

     FILE 'STNGUIDE' ENTERED AT 13:24:02 ON 27 JUL 2005

     FILE 'REGISTRY' ENTERED AT 13:24:11 ON 27 JUL 2005
L13             ANALYZE PLU=ON  L11 1- LC :       4 TERMS  (ANALYZE ENDED BY
                USER)

     FILE 'LREGISTRY' ENTERED AT 13:25:52 ON 27 JUL 2005
L14             STR L6

     FILE 'REGISTRY' ENTERED AT 13:33:00 ON 27 JUL 2005
L15           50 SEA SUB=L8 SSS SAM L14
                D QUE STAT
L16         7180 SEA SUB=L8 SSS FUL L14
                SAVE TEMP L16 NWA291PSET2/A
                D SAVED
L17         2217 SEA ABB=ON  PLU=ON  L16 AND L11
L18            7 SEA ABB=ON  PLU=ON  L17 AND L4
                SAVE TEMP L17 NWA291RIND/A

     FILE 'STNGUIDE' ENTERED AT 13:36:43 ON 27 JUL 2005
                D SAVED

     FILE 'REGISTRY' ENTERED AT 13:37:13 ON 27 JUL 2005
L19             ANALYZE PLU=ON  L17 1- LC :      20 TERMS
                D

     FILE 'STNGUIDE' ENTERED AT 13:40:39 ON 27 JUL 2005

     FILE 'HCAPLUS' ENTERED AT 13:42:35 ON 27 JUL 2005
L20          628 SEA ABB=ON  PLU=ON  L17
L21            6 SEA ABB=ON  PLU=ON  L17 (L) CAT/RL
L22           11 SEA ABB=ON  PLU=ON  L17 (L) ?CATALY?
L23           26 SEA ABB=ON  PLU=ON  L17 (L) ?POLYMER?
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L24          35 SEA ABB=ON  PLU=ON  (L21 OR L22 OR L23)

     FILE 'STNGUIDE' ENTERED AT 13:44:20 ON 27 JUL 2005

     FILE 'HCAPLUS' ENTERED AT 13:45:01 ON 27 JUL 2005
L25          10 SEA ABB=ON  PLU=ON  L20 AND (POLYMER?)/SC,SX
L26          41 SEA ABB=ON  PLU=ON  (L24 OR L25)
                D SCAN TI HIT

     FILE 'STNGUIDE' ENTERED AT 13:45:38 ON 27 JUL 2005

     FILE 'REGISTRY' ENTERED AT 13:47:39 ON 27 JUL 2005
L27        6858 SEA ABB=ON  PLU=ON  L16 AND L10
L28        4641 SEA ABB=ON  PLU=ON  L27 NOT L17

     FILE 'HCAPLUS' ENTERED AT 13:48:06 ON 27 JUL 2005
L29        1433 SEA ABB=ON  PLU=ON  L28
L30           7 SEA ABB=ON  PLU=ON  L28 (L) CAT/RL
L31          70 SEA ABB=ON  PLU=ON  L28 (L) ?POLYMER?
L32          10 SEA ABB=ON  PLU=ON  L28 (L) ?CATALY?
L33          78 SEA ABB=ON  PLU=ON  (L30 OR L31 OR L32)
L34          71 SEA ABB=ON  PLU=ON  L33 NOT L26
L35          26 SEA ABB=ON  PLU=ON  L34 AND POLYMER?/SC,SX
L36          67 SEA ABB=ON  PLU=ON  L35 OR L26
L37          18 SEA ABB=ON  PLU=ON  L36 AND ?CATALY?
L38          67 SEA ABB=ON  PLU=ON  L36 OR L26
                D QUE L36
L39          65 SEA ABB=ON  PLU=ON  L36 AND (PY<2004 OR PRY<2004 OR AY<2004)
                D QUE
L40          57 SEA ABB=ON  PLU=ON  L39 AND ?POLYMER?
L41          59 SEA ABB=ON  PLU=ON  L36 AND ?POLYMER?
L42          10 SEA ABB=ON  PLU=ON  L41 AND ?CATALY?
L43          59 SEA ABB=ON  PLU=ON  (L41 OR L42)

     FILE 'STNGUIDE' ENTERED AT 13:54:08 ON 27 JUL 2005

     FILE 'HCAPLUS' ENTERED AT 13:55:35 ON 27 JUL 2005
                SAVE TEMP L43 NWA291HCA1/A

     FILE 'STNGUIDE' ENTERED AT 13:55:58 ON 27 JUL 2005
                D SAVED

     FILE 'USPATFULL, USPAT2, CAOLD, TOXCENTER, CASREACT' ENTERED AT 13:57:12
     ON 27 JUL 2005
L44         201 SEA ABB=ON  PLU=ON  L17
L45         188 DUP REM L44 (13 DUPLICATES REMOVED)
                     ANSWERS '1-96' FROM FILE USPATFULL
                     ANSWERS '97-151' FROM FILE CAOLD
                     ANSWERS '152-168' FROM FILE TOXCENTER
                     ANSWERS '169-188' FROM FILE CASREACT
L46          32 SEA ABB=ON  PLU=ON  L45 AND ?CATALY?/BI,IT,ST,CC,CT
L47          81 SEA ABB=ON  PLU=ON  L45 AND ?POLYMER?/BI,IT,ST,CC,CT
L48          26 SEA ABB=ON  PLU=ON  L46 AND L47
                SAVE TEMP L48 NWA291MUL1/A
                D SAVED

     FILE 'STNGUIDE' ENTERED AT 14:01:01 ON 27 JUL 2005

     FILE 'REGISTRY' ENTERED AT 14:01:03 ON 27 JUL 2005
L49           0 SEA ABB=ON  PLU=ON  L17 AND MEDLINE/LC
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L50           0 SEA ABB=ON  PLU=ON  L17 AND BIOSIS/LC
L51           0 SEA ABB=ON  PLU=ON  L17 AND EMBASE/LC
L52           0 SEA ABB=ON  PLU=ON  L17 AND CANCERLIT/LC

     FILE 'STNGUIDE' ENTERED AT 14:02:36 ON 27 JUL 2005

     FILE 'REGISTRY' ENTERED AT 14:05:15 ON 27 JUL 2005
L53           0 SEA ABB=ON  PLU=ON  (L49 OR L50 OR L51 OR L52)
                SAVE TEMP L53 NWA291MBE/A

     FILE 'STNGUIDE' ENTERED AT 14:05:59 ON 27 JUL 2005
                D SAVED

     FILE 'HCAPLUS' ENTERED AT 14:08:32 ON 27 JUL 2005
L54             QUE ABB=ON  PLU=ON  NICKEL OR NI OR PALLADIUM OR PD OR
                PLATINUM OR PT

     FILE 'PASCAL, JICST-EPLUS, SCISEARCH, APOLLIT' ENTERED AT 14:09:19 ON 27
     JUL 2005
L55         148 SEA ABB=ON  PLU=ON  L54 (5A) AZO
L56          43 SEA ABB=ON  PLU=ON  ((TRANSITION OR (D(1W) BLOCK)) (2A) (METAL
                OR ELEMENT)) (5A) AZO
L57           9 SEA ABB=ON  PLU=ON  (L55 OR L56) (10A) ?CATALY?
L58           7 SEA ABB=ON  PLU=ON  (L55 OR L56) (10A) ?POLYMER?
L59          16 SEA ABB=ON  PLU=ON  (L57 OR L58)
L60          10 DUP REM L59 (6 DUPLICATES REMOVED)
                     ANSWERS '1-6' FROM FILE PASCAL
                     ANSWER '7' FROM FILE JICST-EPLUS
                     ANSWERS '8-10' FROM FILE SCISEARCH
                D SCAN
                SAVE TEMP L60 NWA291MUL2/A
                D SAVED

     FILE 'STNGUIDE' ENTERED AT 14:14:25 ON 27 JUL 2005

     FILE 'WPIX' ENTERED AT 15:04:44 ON 27 JUL 2005
L61        3995 SEA ABB=ON  PLU=ON  ((K531 OR K534) (P) (A42? OR A430 OR A500
                OR A54? OR A600 OR A67?))/M0,M1,M2,M3,M4,M5,M6
L62        1350 SEA ABB=ON  PLU=ON  C09B045?/IPC
L63         986 SEA ABB=ON  PLU=ON  L61 AND L62
L64           1 SEA ABB=ON  PLU=ON  L63 AND L2
L65        1642 SEA ABB=ON  PLU=ON  B01J031-12/IPC
L66       12140 SEA ABB=ON  PLU=ON  A02-A06/MC
L67           1 SEA ABB=ON  PLU=ON  L63 AND (L65 OR L66)
L68        2016 SEA ABB=ON  PLU=ON  (NICKEL/BIX OR NI/BIX OR PALLADIUM/BIX OR
                PD/BIX OR PLATINUM/BIX OR PT/BIX) (10A) AZO?/BIX
L69          50 SEA ABB=ON  PLU=ON  L63 AND L68
L70         594 SEA ABB=ON  PLU=ON  L68 (15A) (?CATALY? OR ?POLYMER?)/BIX
L71        1227 SEA ABB=ON  PLU=ON  L68 (L) (?CATALY? OR ?POLYMER?)/BIX
L72          11 SEA ABB=ON  PLU=ON  L69 AND (?CATALY? OR ?POLYMER?)/BIX
                D TRI 1-11

     FILE 'STNGUIDE' ENTERED AT 15:12:01 ON 27 JUL 2005

     FILE 'WPIX' ENTERED AT 15:12:49 ON 27 JUL 2005
L73           0 SEA ABB=ON  PLU=ON  L72 AND L2
                D QUE L60
L74          30 SEA ABB=ON  PLU=ON  (((TRANSITION OR (D(1W) BLOCK)) (2A)
                (METAL OR ELEMENT))(5A) AZO)/BIX
L75          54 SEA ABB=ON  PLU=ON  (L68 OR L74) AND L63
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L76          12 SEA ABB=ON  PLU=ON  L75 AND (?CATALY? OR ?POLYMER?)/BIX
L77           1 SEA ABB=ON  PLU=ON  L2 AND L76
L78          12 SEA ABB=ON  PLU=ON  L67 OR L76
                SAVE TEMP L78 NWA291WPI1/A

     FILE 'STNGUIDE' ENTERED AT 15:16:15 ON 27 JUL 2005
                D SAVED

     FILE 'HCAPLUS, MEDLINE, BIOSIS, PASCAL, APOLLIT, JICST-EPLUS, EMBASE,
     SCISEARCH, WPIX, CONF, CONFSCI' ENTERED AT 15:19:10 ON 27 JUL 2005
L79        2617 SEA ABB=ON  PLU=ON  WEISS, T?/AU
L80        1246 DUP REM L79 (1371 DUPLICATES REMOVED)
                     ANSWERS '1-263' FROM FILE HCAPLUS
                     ANSWERS '264-598' FROM FILE MEDLINE
                     ANSWERS '599-795' FROM FILE BIOSIS
                     ANSWERS '796-906' FROM FILE PASCAL
                     ANSWER '907' FROM FILE APOLLIT
                     ANSWERS '908-978' FROM FILE EMBASE
                     ANSWERS '979-1128' FROM FILE SCISEARCH
                     ANSWERS '1129-1204' FROM FILE WPIX
                     ANSWERS '1205-1246' FROM FILE CONFSCI
L81          29 SEA ABB=ON  PLU=ON  L80 AND ?CATALY?
L82          42 SEA ABB=ON  PLU=ON  L80 AND ?POLYMER?
L83          13 SEA ABB=ON  PLU=ON  L81 AND L82
                SAVE TEMP L83 NWA291MULINV/A
                D SAVED

     FILE 'STNGUIDE' ENTERED AT 15:22:46 ON 27 JUL 2005

     FILE 'LREGISTRY' ENTERED AT 15:23:04 ON 27 JUL 2005

     FILE 'REGISTRY' ENTERED AT 15:23:07 ON 27 JUL 2005

     FILE 'ZCAPLUS' ENTERED AT 15:23:10 ON 27 JUL 2005

     FILE 'HCAPLUS' ENTERED AT 15:23:14 ON 27 JUL 2005

     FILE 'MEDLINE' ENTERED AT 15:23:17 ON 27 JUL 2005

     FILE 'BIOSIS' ENTERED AT 15:23:20 ON 27 JUL 2005

     FILE 'PASCAL' ENTERED AT 15:23:23 ON 27 JUL 2005

     FILE 'APOLLIT' ENTERED AT 15:23:27 ON 27 JUL 2005

     FILE 'JICST-EPLUS' ENTERED AT 15:23:32 ON 27 JUL 2005

     FILE 'EMBASE' ENTERED AT 15:23:35 ON 27 JUL 2005

     FILE 'SCISEARCH' ENTERED AT 15:23:39 ON 27 JUL 2005

     FILE 'WPIX' ENTERED AT 15:23:42 ON 27 JUL 2005

     FILE 'CONF' ENTERED AT 15:23:46 ON 27 JUL 2005

     FILE 'CONFSCI' ENTERED AT 15:23:50 ON 27 JUL 2005

     FILE 'USPATFULL' ENTERED AT 15:23:55 ON 27 JUL 2005

     FILE 'USPAT2' ENTERED AT 15:23:59 ON 27 JUL 2005
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     FILE 'CAOLD' ENTERED AT 15:24:02 ON 27 JUL 2005

     FILE 'TOXCENTER' ENTERED AT 15:24:06 ON 27 JUL 2005

     FILE 'CASREACT' ENTERED AT 15:24:10 ON 27 JUL 2005

     FILE 'STNGUIDE' ENTERED AT 15:24:12 ON 27 JUL 2005
                D QUE STAT
                D QUE STAT L8
                D QUE STAT L16
                D QUE L43
                D QUE NOS L48
                D QUE NOS L53
                D QUE NOS L60
                D QUE L78

     FILE 'HCAPLUS, USPATFULL, PASCAL, JICST-EPLUS, SCISEARCH, WPIX' ENTERED
     AT 15:26:08 ON 27 JUL 2005
L84         105 DUP REM L43 L48 L60 L78 (2 DUPLICATES REMOVED)
                    ANSWERS '1-59' FROM FILE HCAPLUS
                    ANSWERS '60-84' FROM FILE USPATFULL
                    ANSWERS '85-90' FROM FILE PASCAL
                    ANSWER '91' FROM FILE JICST-EPLUS
                    ANSWERS '92-94' FROM FILE SCISEARCH
                    ANSWERS '95-105' FROM FILE WPIX

     FILE 'STNGUIDE' ENTERED AT 15:26:33 ON 27 JUL 2005

     FILE 'HCAPLUS, USPATFULL, PASCAL, JICST-EPLUS, SCISEARCH, WPIX' ENTERED
     AT 15:26:40 ON 27 JUL 2005
                D IBIB ED AB HITSTR

     FILE 'STNGUIDE' ENTERED AT 15:26:41 ON 27 JUL 2005

     FILE 'HCAPLUS, USPATFULL, PASCAL, JICST-EPLUS, SCISEARCH, WPIX' ENTERED
     AT 15:27:09 ON 27 JUL 2005
                D IBIB ED AB HITSTR 2-59

     FILE 'STNGUIDE' ENTERED AT 15:27:29 ON 27 JUL 2005

     FILE 'HCAPLUS, USPATFULL, PASCAL, JICST-EPLUS, SCISEARCH, WPIX' ENTERED
     AT 15:28:09 ON 27 JUL 2005
                D IBIB AB HITSTR 60

     FILE 'STNGUIDE' ENTERED AT 15:28:11 ON 27 JUL 2005

     FILE 'HCAPLUS, USPATFULL, PASCAL, JICST-EPLUS, SCISEARCH, WPIX' ENTERED
     AT 15:28:29 ON 27 JUL 2005
                D IBIB AB HITSTR 61-84

     FILE 'STNGUIDE' ENTERED AT 15:28:42 ON 27 JUL 2005

     FILE 'HCAPLUS, USPATFULL, PASCAL, JICST-EPLUS, SCISEARCH, WPIX' ENTERED
     AT 15:29:23 ON 27 JUL 2005
                D IBIB ED AB HITIND 85-94

     FILE 'STNGUIDE' ENTERED AT 15:29:31 ON 27 JUL 2005

     FILE 'HCAPLUS, USPATFULL, PASCAL, JICST-EPLUS, SCISEARCH, WPIX' ENTERED
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AT 15:30:02 ON 27 JUL 2005
           D IALL ABEQ TECH ABEX 95-

FILE 'STNGUIDE' ENTERED AT 15:30:11 ON 27 JUL 2005
           D QUE L83

FILE 'HCAPLUS' ENTERED AT 15:31:15 ON 27 JUL 2005
           D IBIB ED AB L83

FILE 'STNGUIDE' ENTERED AT 15:31:15 ON 27 JUL 2005

FILE 'HCAPLUS' ENTERED AT 15:31:26 ON 27 JUL 2005
           D IBIB ED AB L83 2-

FILE 'STNGUIDE' ENTERED AT 15:31:29 ON 27 JUL 2005

FILE 'STNGUIDE' ENTERED AT 15:32:14 ON 27 JUL 2005
           D QUE STAT L8
           D QUE STAT L16
           D QUE L43
           D QUE NOS L48
           D QUE L53
           D QUE L60
           D QUE L78
           D QUE L83


FILE HOME

FILE HCAPLUS

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FILE COVERS 1907 - 27 Jul 2005  VOL 143 ISS 5
FILE LAST UPDATED: 26 Jul 2005  (20050726/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

FILE STNGUIDE
FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Jul 22, 2005 (20050722/UP).

FILE WPIX
FILE LAST UPDATED:            25 JUL 2005      <20050725/UP>
MOST RECENT DERWENT UPDATE:      200547         <200547/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
    PLEASE VISIT:
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 http://www.stn-international.de/training_center/patents/stn_guide.pdf <<<

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
    http://thomsonderwent.com/coverage/latestupdates/           <<<

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER
    GUIDES, PLEASE VISIT:
    http://thomsonderwent.com/support/userguides/               <<<

>>> NEW! FAST-ALERTING ACCESS TO NEWLY-PUBLISHED PATENT
    DOCUMENTATION NOW AVAILABLE IN DERWENT WORLD PATENTS INDEX
    FIRST VIEW - FILE WPIFV.
    FOR FURTHER DETAILS: http://www.thomsonderwent.com/dwpifv  <<<

>>> THE CPI AND EPI MANUAL CODES HAVE BEEN REVISED FROM UPDATE 200501.
    PLEASE CHECK:
http://thomsonderwent.com/support/dwpiref/reftools/classification/code-rev
    FOR DETAILS. <<<

FILE REGISTRY
Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   26 JUL 2005  HIGHEST RN 857144-48-0
DICTIONARY FILE UPDATES:  26 JUL 2005  HIGHEST RN 857144-48-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

****************************************************************
*                                                                     *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added,   *
* effective March 20, 2005.  A new display format, IDERL, is now    *
* available and contains the CA role and document type information. *
*                                                                     *
****************************************************************

Structure search iteration limits have been increased.  See HELP SLIMITS
for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

FILE LREGISTRY
LREGISTRY IS A STATIC LEARNING FILE

NEW CAS INFORMATION USE POLICIES, ENTER HELP USAGETERMS FOR DETAILS.

FILE USPATFULL
FILE COVERS 1971 TO PATENT PUBLICATION DATE: 26 Jul 2005 (20050726/PD)
FILE LAST UPDATED: 26 Jul 2005 (20050726/ED)
HIGHEST GRANTED PATENT NUMBER: US6922846
HIGHEST APPLICATION PUBLICATION NUMBER: US2005160510
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CA INDEXING IS CURRENT THROUGH 26 Jul 2005 (20050726/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 26 Jul 2005 (20050726/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2005

>>>  USPAT2 is now available.  USPATFULL contains full text of the     <<<
>>>  original, i.e., the earliest published granted patents or         <<<
>>>  applications.  USPAT2 contains full text of the latest US         <<<
>>>  publications, starting in 2001, for the inventions covered in     <<<
>>>  USPATFULL.  A USPATFULL record contains not only the original     <<<
>>>  published document but also a list of any subsequent             <<<
>>>  publications.  The publication number, patent kind code, and      <<<
>>>  publication date for all the US publications for an invention     <<<
>>>  are displayed in the PI (Patent Information) field of USPATFULL   <<<
>>>  records and may be searched in standard search fields, e.g., /PN, <<<
>>>  /PK, etc.                                                         <<<

>>>  USPATFULL and USPAT2 can be accessed and searched together        <<<
>>>  through the new cluster USPATALL.  Type FILE USPATALL to          <<<
>>>  enter this cluster.                                               <<<
>>>                                                                    <<<
>>>  Use USPATALL when searching terms such as patent assignees,       <<<
>>>  classifications, or claims, that may potentially change from      <<<
>>>  the earliest to the latest publication.                           <<<

This file contains CAS Registry Numbers for easy and accurate
substance identification.

FILE USPAT2

FILE COVERS 2001 TO PUBLICATION DATE: 26 Jul 2005 (20050726/PD)
FILE LAST UPDATED: 26 Jul 2005 (20050726/ED)
HIGHEST GRANTED PATENT NUMBER: US2005131306
HIGHEST APPLICATION PUBLICATION NUMBER: US2005160493
CA INDEXING IS CURRENT THROUGH 26 Jul 2005 (20050726/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 26 Jul 2005 (20050726/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED:  Jun 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2005

USPAT2 is a companion file to USPATFULL.  USPAT2 contains full text
of the latest US publications, starting in 2001, for the inventions
covered in USPATFULL.  USPATFULL contains full text of the original
published US patents from 1971 to date and the original applications
from 2001.  In addition, a USPATFULL record for an invention contains
a complete list of publications that may be searched in standard
search fields, e.g., /PN, /PK, etc.

USPATFULL and USPAT2 can be accessed and searched together through
the new cluster USPATALL.  Type FILE USPATALL to enter this cluster.

Use USPATALL when searching terms such as patent assignees,
classifications, or claims, that may potentially change from the
earliest to the latest publication.

FILE CAOLD
FILE COVERS 1907-1966
FILE LAST UPDATED:  01 May 1997 (19970501/UP)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.  Title keywords, authors, patent
```

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  assignees, and patent information, e.g., patent numbers, are
  now searchable from 1907-1966.  TIFF images of CA abstracts
  printed between 1907-1966 are available in the PAGE
  display formats.

  New CAS Information Use Policies, enter HELP USAGETERMS for details.

  This file supports REG1stRY for direct browsing and searching of
  all substance data from the REGISTRY file.  Enter HELP FIRST for
  more information.

FILE TOXCENTER

FILE COVERS 1907 TO 19 Jul 2005 (20050719/ED)

This file contains CAS Registry Numbers for easy and accurate substance
identification.

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TOXCENTER has been enhanced with new files segments and search fields.
See HELP CONTENT for more information.

TOXCENTER thesauri in the /CN, /CT, and /MN fields incorporate the
MeSH 2005 vocabulary.  See http://www.nlm.nih.gov/mesh/ and
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html for a
description of changes.

FILE CASREACT
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FILE CONTENT:1840 - 24 Jul 2005 VOL 143 ISS 4

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*******************************************************
*                                                     *
*     CASREACT now has more than 9.2 million reactions      *
*                                                     *
*******************************************************

Some CASREACT records are derived from the ZIC/VINITI database (1974-1991)
provided by InfoChem, INPI data prior to 1986, and Biotransformations
database compiled under the direction of Professor Dr. Klaus Kieslich.

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FILE PASCAL
FILE LAST UPDATED: 25 JUL 2005       <20050725/UP>
FILE COVERS 1977 TO DATE.

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION IS AVAILABLE
    IN THE BASIC INDEX (/BI) FIELD  <<<

FILE JICST-EPLUS
FILE COVERS 1985 TO 25 JUL 2005 (20050725/ED)
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THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED
TERM (/CT) THESAURUS RELOAD.

FILE SCISEARCH

FILE COVERS 1974 TO 22 Jul 2005 (20050722/ED)

SCISEARCH has been reloaded, see HELP RLOAD for details.

FILE APOLLIT
FILE LAST UPDATED: 27 JUL 2005       <20050727/UP>
FILE COVERS 1973 TO DATE


FILE MEDLINE
 FILE LAST UPDATED: 26 JUL 2005 (20050726/UP).  FILE COVERS 1950 TO DATE.

 On December 19, 2004, the 2005 MeSH terms were loaded.

 The MEDLINE reload for 2005 is now available.  For details enter HELP
 RLOAD at an arrow promt (=>).  See also:

    http://www.nlm.nih.gov/mesh/
    http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

 OLDMEDLINE now back to 1950.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2005 vocabulary.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

FILE BIOSIS
FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 21 July 2005 (20050721/ED)

FILE RELOADED: 19 October 2003.

FILE EMBASE
 FILE COVERS 1974 TO 21 Jul 2005 (20050721/ED)

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FILE CONF
FILE LAST UPDATED: 22 JUL 2005       <20050722/UP>
FILE COVERS 1976 TO DATE.

FILE CONFSCI
FILE COVERS 1973 TO 25 May 2005 (20050525/ED)

FILE ZCAPLUS
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FILE LAST UPDATED: 26 Jul 2005  (20050726/ED)

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  This file contains CAS Registry Numbers for easy and accurate
  substance identification.

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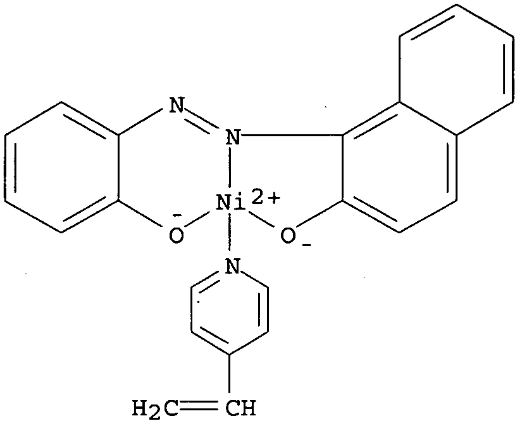
)]-, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

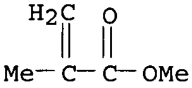
CM 1

CRN 147044-74-4
CMF C23 H17 N3 Ni O2
CCI CCS



CM 2

CRN 80-62-6
CMF C5 H8 O2

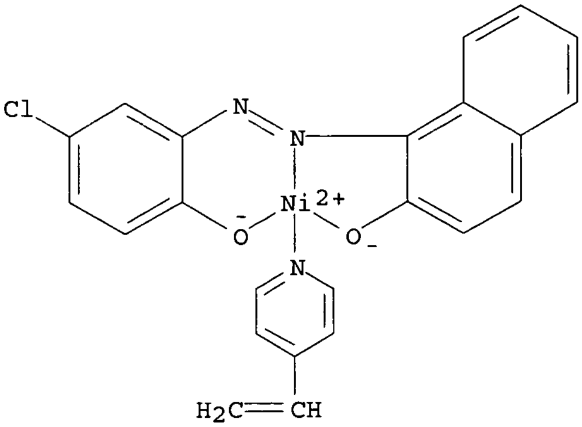


$$\mathrm{Me{-}\overset{\overset{H_2C}{\|}}{C}{-}\overset{\overset{O}{\|}}{C}{-}OMe}$$

RN 147044-77-7 HCAPLUS
CN Nickel, [1-[(5-chloro-2-hydroxyphenyl)azo]-2-naphthalenolato(2-)](4-ethenylpyridine)-, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

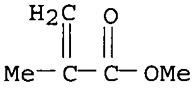
CM 1

CRN 147044-76-6
CMF C23 H16 Cl N3 Ni O2
CCI CCS



CM 2

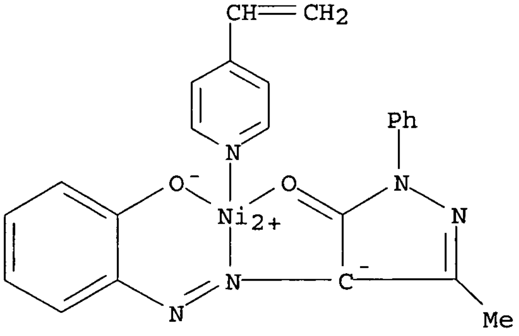
CRN 80-62-6
CMF C5 H8 O2



RN 147469-43-0 HCAPLUS
CN Nickel, [2,4-dihydro-4-[(2-hydroxyphenyl)azo]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)](4-ethenylpyridine)-, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

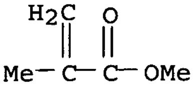
CRN 147469-42-9
CMF C23 H19 N5 Ni O2
CCI CCS



CM 2

CRN 80-62-6

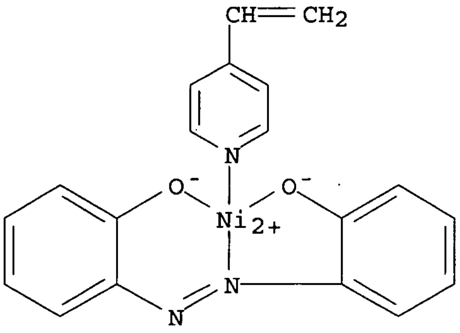
CMF C5 H8 O2


$\mathrm{Me{-}C({=}CH_2){-}C({=}O){-}OMe}$

IT **147044-72-2P 147044-74-4P 147044-76-6P**
147312-52-5P 147312-53-6P 147312-54-7P
147361-09-9P 147361-10-2P 147361-15-7P
147469-42-9P 147486-63-3P
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of, as **polymerizable** dye)

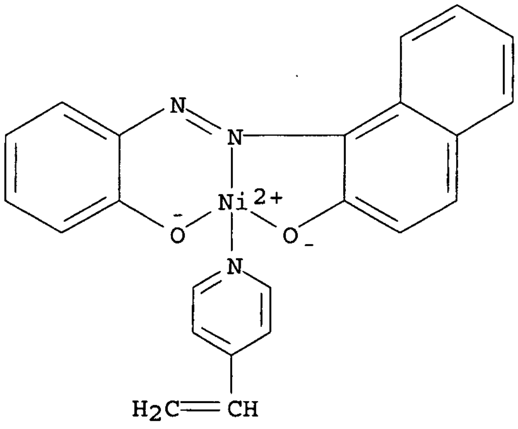
RN 147044-72-2 HCAPLUS

CN Nickel, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](4-ethenylpyridine)- (9CI) (CA INDEX NAME)



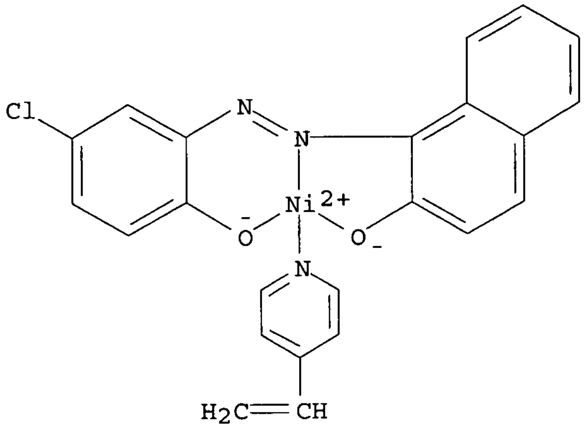
RN 147044-74-4 HCAPLUS

CN Nickel, (4-ethenylpyridine)[1-[[2-(hydroxy-κO)phenyl]azo-κN1]-2-naphthalenolato(2-)-κO]- (9CI) (CA INDEX NAME)

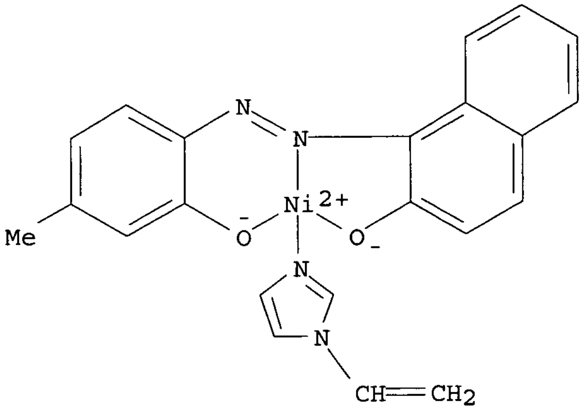


RN 147044-76-6 HCAPLUS

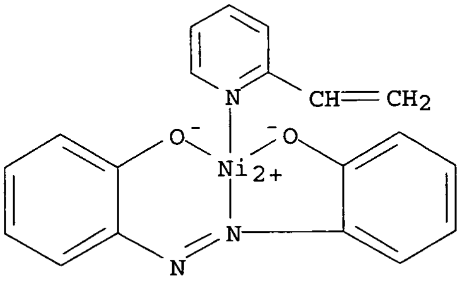
CN Nickel, [1-[(5-chloro-2-hydroxyphenyl)azo]-2-naphthalenolato(2-)](4-ethenylpyridine)- (9CI) (CA INDEX NAME)



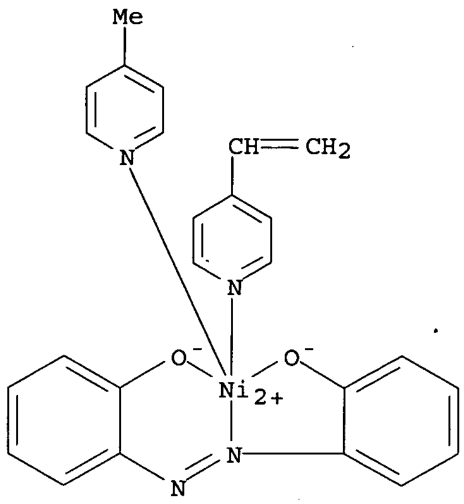
RN 147312-52-5 HCAPLUS
CN Nickel, (1-ethenyl-1H-imidazole-N3)[1-[(2-hydroxy-4-methylphenyl)azo]-2-naphthalenolato(2-)]- (9CI) (CA INDEX NAME)



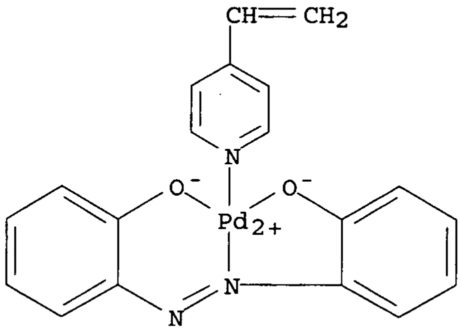
RN 147312-53-6 HCAPLUS
CN Nickel, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](2-ethenylpyridine)- (9CI) (CA INDEX NAME)



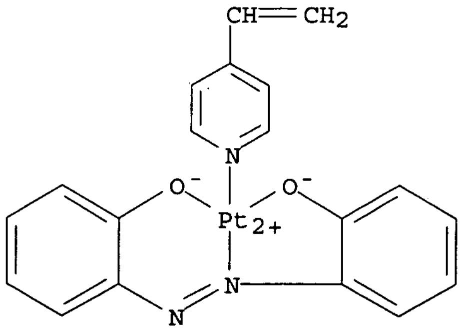
RN 147312-54-7 HCAPLUS
CN Nickel, [[2,2'-azobis[phenolato]](2-)-N,O,O'](4-ethenylpyridine)(4-methylpyridine)- (9CI) (CA INDEX NAME)



RN 147361-09-9 HCAPLUS
CN Palladium, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](4-ethenylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)

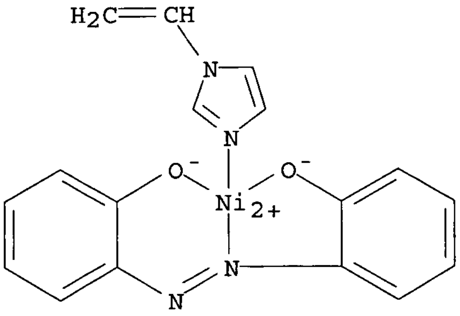


RN 147361-10-2 HCAPLUS
CN Platinum, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](4-ethenylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)



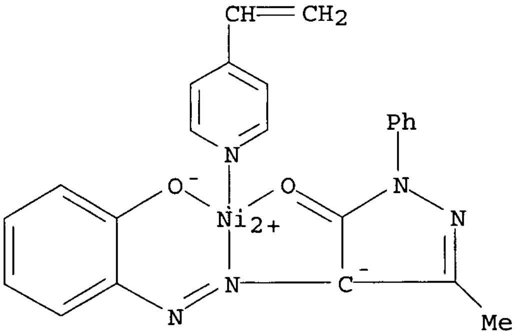
RN 147361-15-7 HCAPLUS

CN Nickel, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](1-ethenyl-1H-imidazole-κN3)- (9CI) (CA INDEX NAME)



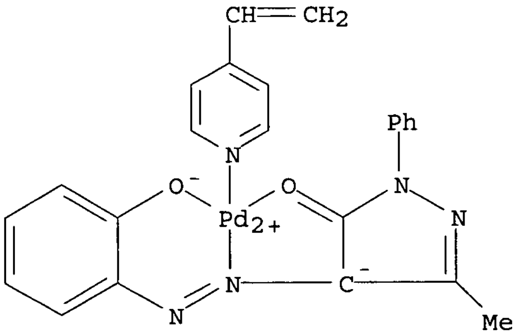
RN 147469-42-9 HCAPLUS

CN Nickel, [2,4-dihydro-4-[[2-(hydroxy-κO)phenyl]azo-κN1]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)-κO3](4-ethenylpyridine)- (9CI) (CA INDEX NAME)



RN 147486-63-3 HCAPLUS

CN Palladium, [2,4-dihydro-4-[[2-(hydroxy-κO)phenyl]azo-κN1]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)-κO3](4-ethenylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)



L84 ANSWER 36 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1992:491040 HCAPLUS

DOCUMENT NUMBER: 117:91040
TITLE: **Polymer** scale preventive agent, **polymerization** vessel for preventing **polymer** scale deposition, and manufacture of **polymers** using this vessel
INVENTOR(S): Shimizu, Toshihide; Shigemitsu, Minoru
PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 15 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 482593	A1	19920429	EP 1991-118010	19911022
EP 482593	B1	19950111		
R: BE, DE, ES, FR, GB, GR, IT, NL, SE				
CA 2050880	AA	19920308	CA 1991-2050880	19910906
CA 2053827	AA	19920424	CA 1991-2053827	19911021
AU 9186047	A1	19920430	AU 1991-86047	19911022
AU 637531	B2	19930527		
CN 1061977	A	19920617	CN 1991-111081	19911022
JP 05005002	A2	19930114	JP 1991-302285	19911022
JP 2627031	B2	19970702		
HU 62018	A2	19930329	HU 1991-3322	19911022
HU 211784	B	19951228		
ES 2069796	T3	19950516	ES 1991-118010	19911022
PL 168593	B1	19960329	PL 1991-292132	19911022

PRIORITY APPLN. INFO.:
JP 1990-284559 A 19901023
JP 1990-238530 A 19900907
JP 1990-238531 A 19900907

ED Entered STN: 05 Sep 1992

AB Vinyl monomers are **polymerized** without scale formation in reactors coated with scale-preventing coatings comprising N-containing organic compds. bearing ≥ 5 conjugated π bonds, anionic organic sulfonic or carboxylic acids bearing ≥ 5 conjugated π bonds, and vinylpyrrolidone-based **polymers.** The products of the **polymerization** have very few fish eyes. Vinyl chloride was **polymerized** in a reactor coated with a 60:30:10 mixture of Sudan Black B (N-containing compound), C.I. Acid Black 2 (anionic compound), and poly(vinylpyrrolidone) to give, after 10 **polymerization** runs, no scale buildup in liquid or liq-gas interface areas.

IT **12392-64-2**, C.I. Acid blue 161
RL: USES (Uses)
(scale-preventing coatings, containing nitrogen-containing compds. and vinylpyrrolidinone **polymers**, for reactors for vinyl monomer **polymerization**)

RN 12392-64-2 HCAPLUS

CN Chromate(3-), bis[3-hydroxy-4-[(2-hydroxy-1-naphthalenyl)azo]-1-naphthalenesulfonato(3-)]-, disodium hydrogen (9CI) (CA INDEX NAME)

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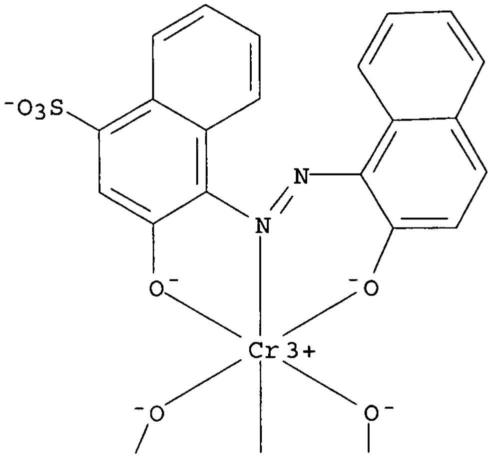
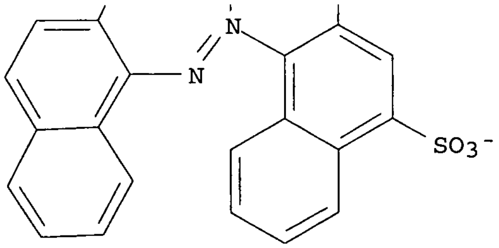


PAGE 2-A



● H^+

●2 Na^+

L84 ANSWER 37 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1993:255554 HCAPLUS
DOCUMENT NUMBER: 118:255554
TITLE: Scale-preventing coatings for reactors for **polymerization** of unsaturated compounds
INVENTOR(S): Shimizu, Toshihide; Shigemitsu, Minoru

PATENT ASSIGNEE(S):	Japan
SOURCE:	Can. Pat. Appl., 30 pp. CODEN: CPXXEB
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	1

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
	CA 2065513	AA	19921009	CA 1992-2065513		19920407
	JP 04370101	A2	19921222	JP 1991-210312		19910726
	US 5364466	A	19941115	US 1992-865265		19920408
PRIORITY APPLN. INFO.:				JP 1991-103111	A	19910408
				JP 1991-210312	A	19910727

ED Entered STN: 26 Jun 1993

AB The title coatings comprise N-containing organic compound bearing ≥5 conjugated π bonds and free of sulfonic acid or carboxy groups, anionic organic compds. bearing ≥5 conjugated π bonds and sulfonic acid or carboxy groups, and H2O-soluble polysaccharides. A typical coating contained Sudan Black B, C.I. Acid Black 2, and chitosan.

IT **12392-64-2**, C.I. Acid blue 161
RL: USES (Uses)
(scale-preventing coatings containing, for reactors for **polymerization** of unsatd. compds.)

RN 12392-64-2 HCAPLUS

CN Chromate(3-), bis[3-hydroxy-4-[(2-hydroxy-1-naphthalenyl)azo]-1-naphthalenesulfonato(3-)]-, disodium hydrogen (9CI) (CA INDEX NAME)

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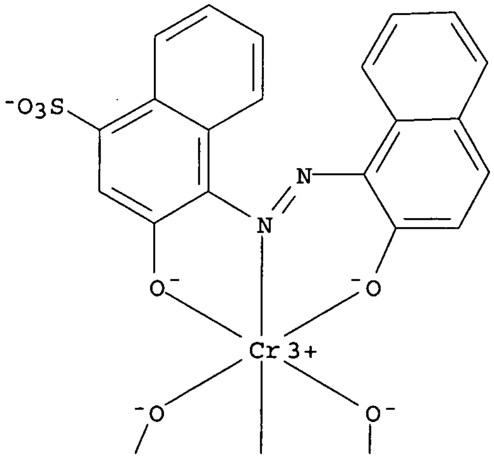

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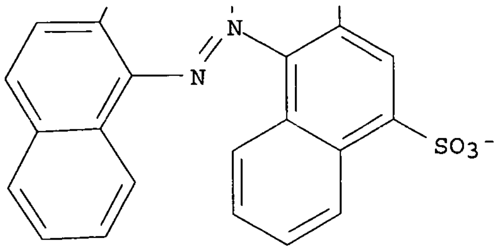

● H+

●2 Na+

```
L84  ANSWER 38 OF 105  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         1991:608881  HCAPLUS
DOCUMENT NUMBER:          115:208881
TITLE:                    Prevention of scale in polymerization of
                          vinyl halides
INVENTOR(S):              Watanabe, Mikio; Usu, Masahiro; Ueno, Susumu
PATENT ASSIGNEE(S):       Shin-Etsu Chemical Industry Co., Ltd., Japan
SOURCE:                   Jpn. Kokai Tokkyo Koho, 7 pp.
                          CODEN: JKXXAF
DOCUMENT TYPE:            Patent
LANGUAGE:                 Japanese
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.          KIND    DATE          APPLICATION NO.        DATE
     ---------------     ----    --------      --------------------   --------
     JP 03131602          A2     19910605      JP 1989-269883         19891017
PRIORITY APPLN. INFO.:                         JP 1989-269883         19891017
ED   Entered STN:  15 Nov 1991
AB   In the title process, reactors are coated with scale inhibitors and then
     with compns. containing alkaline earth compds. and anionic dyes.  Thus,
suspension
     polymerization of vinyl chloride and vinyl acetate in a reactor coated
     with C.I. Acid Black 2 and then with a 1:1 mixture of Ca3(PO4)2 and C.I.
     Acid Blue 40 resulted in no scale; vs. 1800 g/m2 without coating, or 150
     with only 1 coating.
IT   6408-12-4, C.I. Acid Black 124
     RL: USES (Uses)
        (scale inhibitors, for reactors for suspension polymerization)
RN   6408-12-4  HCAPLUS
CN   Chromate(3-), bis[3-(hydroxy-κO)-4-[[2-(hydroxy-κO)-3-[[(2-
     methylphenyl)amino]carbonyl]-1-naphthalenyl]azo-κN1]-7-nitro-1-
     naphthalenesulfonato(3-)]-, disodium hydrogen (9CI)  (CA INDEX NAME)
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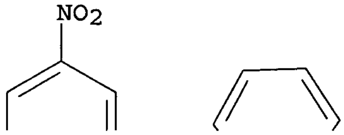
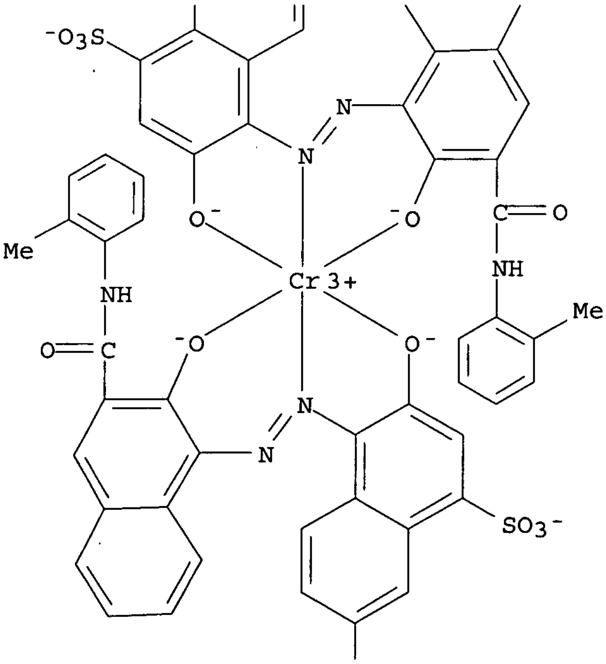
PAGE 1-A



PAGE 2-A



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NO_2

● H^+

●2 Na^+

L84 ANSWER 39 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1991:608876 HCAPLUS
DOCUMENT NUMBER: 115:208876
TITLE: Prevention of scale in **polymerization** of vinyl halides
INVENTOR(S): Watanabe, Mikio; Usu, Masahiro; Ueno, Susumu
PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03111401	A2	19910513	JP 1989-248790	19890925
PRIORITY APPLN. INFO.:			JP 1989-248790	19890925

ED Entered STN: 15 Nov 1991

AB The inner wall of a reactor is doubly coated first with a scale preventing agent and then with a composition containing alkaline earth metal compds. Thus, suspension **polymerization** of vinyl chloride and vinyl acetate in a reactor doubly coated with C.I. Acid Black 2 and Ca3(PO4)2 (adjusted to pH 2.5 with HClO4) produced 10 g scale/m2, vs. 1800 without coating or 150 for coating with C.I. Acid Balck 2 alone.

IT **6408-12-4**, C.I. Acid Black 124
RL: USES (Uses)
(scale preventing agent, coating of reactors with alkaline earth metal salts and, for vinyl chloride **polymerization**)

RN 6408-12-4 HCAPLUS

CN Chromate(3-), bis[3-(hydroxy-κO)-4-[[2-(hydroxy-κO)-3-[[(2-methylphenyl)amino]carbonyl]-1-naphthalenyl]azo-κN1]-7-nitro-1-naphthalenesulfonato(3-)]-, disodium hydrogen (9CI) (CA INDEX NAME)

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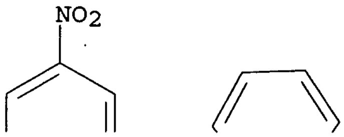

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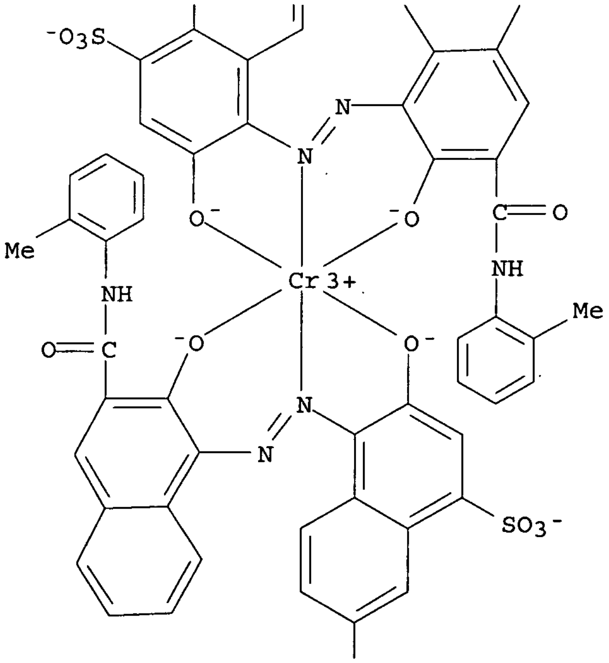

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NO_2

● H^+

●2 Na^+

L84 ANSWER 40 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1991:537010 HCAPLUS
DOCUMENT NUMBER: 115:137010
TITLE: Prevention of **polymer** scale adhesion
INVENTOR(S): Watanabe, Mikio; Usu, Masahiro; Ueno, Susumu
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03095202	A2	19910419	JP 1989-233399	19890908
JP 06017410	B4	19940309		
PRIORITY APPLN. INFO.:			JP 1989-233399	19890908

ED Entered STN: 05 Oct 1991

AB The title process in vinyl halide **polymerization** involves coating the **polymerizer** inner walls with a scale preventor then with a solution containing alkaline earth metal compound and inorg. colloid. A **polymerizer** inner wall was coated with a 0.5% aqueous C.I. Acid Black 2 solution, dried at 50° C for 15 min, coated with 0.5% aqueous 1:3 Ca phosphate-colloidal silica (pH 3.5, phosphoric acid), dried at 50° for 20 min, washed with water, and used in **polymerization** of vinyl chloride and vinyl acetate in water with no scale formation, compared with 1800 g/m2 scale formation without both coatings, 150 g/m2 with first coating only, and 140 g/m2 with the second coating only omitting the first coating.

IT **6408-12-4**, C.I. Acid Black 124
RL: USES (Uses)
(scale-preventing coatings containing, for vinyl halide **polymerization** reactors)

RN 6408-12-4 HCAPLUS

CN Chromate(3-), bis[3-(hydroxy-κO)-4-[[2-(hydroxy-κO)-3-[[(2-methylphenyl)amino]carbonyl]-1-naphthalenyl]azo-κN1]-7-nitro-1-naphthalenesulfonato(3-)]-, disodium hydrogen (9CI) (CA INDEX NAME)

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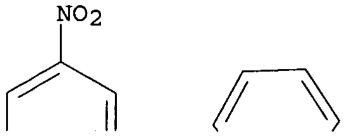

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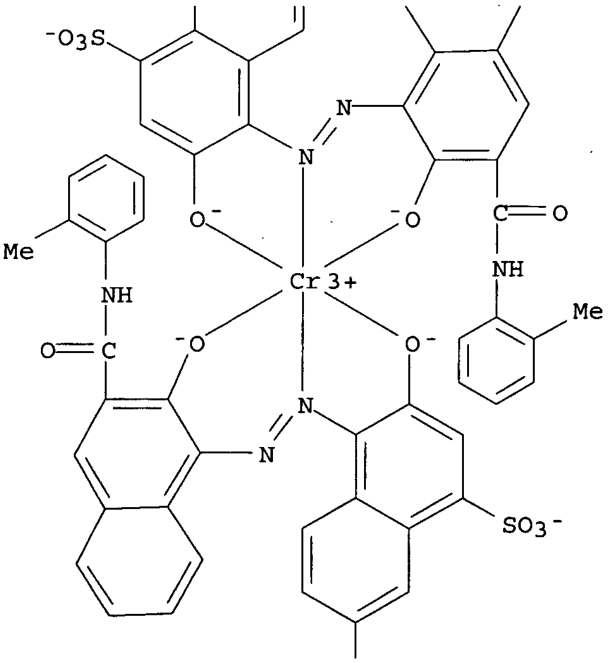

PAGE 3-A

NO_2

● H^+

●2 Na^+

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L84  ANSWER 41 OF 105  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         1991:515299  HCAPLUS
DOCUMENT NUMBER:          115:115299
TITLE:                    Scale inhibitors for polymerization reactors
INVENTOR(S):              Watanabe, Mikio; Kaneko, Ichiro; Ueno, Susumu
PATENT ASSIGNEE(S):       Shin-Etsu Chemical Industry Co., Ltd., Japan
SOURCE:                   Jpn. Kokai Tokkyo Koho, 8 pp.
                          CODEN: JKXXAF
DOCUMENT TYPE:            Patent
LANGUAGE:                 Japanese
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE       APPLICATION NO.        DATE
     ---------------     ----   --------   --------------------   --------
     JP 03074406          A2    19910329   JP 1989-209829         19890814
PRIORITY APPLN. INFO.:                     JP 1989-209829         19890814
ED   Entered STN:  23 Sep 1991
AB   Coating of reactors for vinyl polymerization with inhibitors and alkaline
     earth compds. inhibits the adhesion of polymers.  Thus, aqueous
     polymerization of butadiene with styrene in a reactor coated with C.I.
     Acid Black and Ca phosphate resulted in polymer scale adhesion
     12 g/m2; vs. 1150 without the coating.
IT   6408-12-4, C.I. Acid Black 124
     RL: USES (Uses)
        (scale inhibitors, for reactors for vinyl polymerization)
RN   6408-12-4  HCAPLUS
CN   Chromate(3-), bis[3-(hydroxy-κO)-4-[[2-(hydroxy-κO)-3-[[(2-
     methylphenyl)amino]carbonyl]-1-naphthalenyl]azo-κN1]-7-nitro-1-
     naphthalenesulfonato(3-)]-, disodium hydrogen (9CI)  (CA INDEX NAME)
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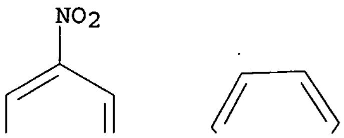

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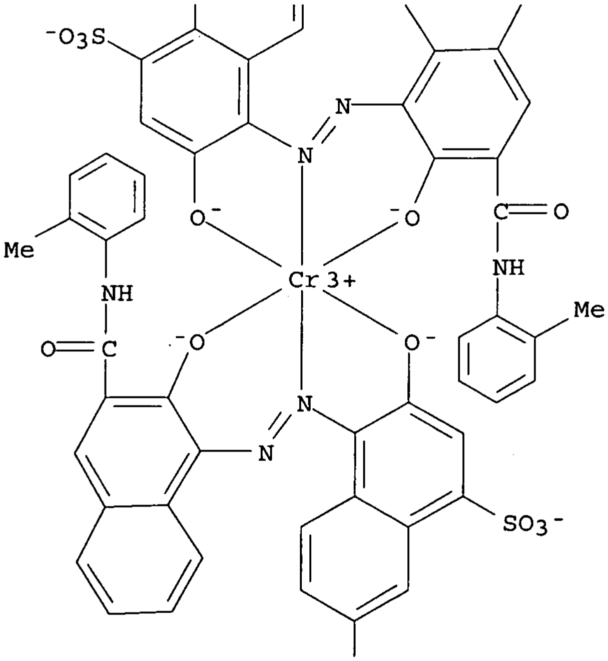

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NO_2

● H^+

●2 Na^+

L84 ANSWER 42 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1990:498279 HCAPLUS
DOCUMENT NUMBER: 113:98279
TITLE: Scale-inhibitor coatings for olefin **polymerization** reactors and other equipment
INVENTOR(S): Shimizu, Toshihide; Kaneko, Ichiro; Watanabe, Mikio
PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02117902	A2	19900502	JP 1988-271557	19881027
JP 07039444	B4	19950501		

PRIORITY APPLN. INFO.: JP 1988-271557 19881027

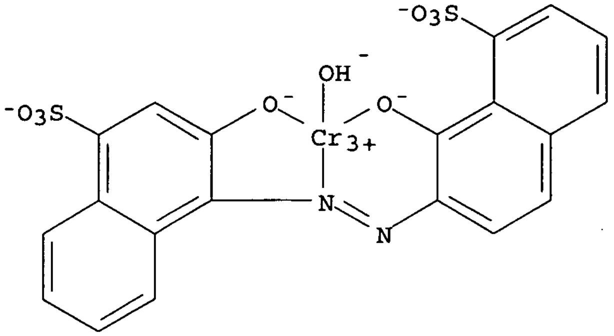
ED Entered STN: 16 Sep 1990

AB The title coatings comprise a polycondensate of polyhydric phenols and pigments and/or dyes. Thus, a title coating was prepared in DMF containing a pyrogallol-benzaldehyde polycondensate and Solvent Black.

IT **6370-08-7**, C.I. Acid Blue 158 **12392-64-2**, C.I. Acid Blue 161
RL: USES (Uses)
(scale-inhibitor coatings containing, for **polymerization** reactors)

RN 6370-08-7 HCAPLUS

CN Chromate(2-), hydroxy[3-(hydroxy-κO)-4-[[1-(hydroxy-κO)-8-sulfo-2-naphthalenyl]azo-κN1]-1-naphthalenesulfonato(4-)]-, disodium, (T-4)- (9CI) (CA INDEX NAME)



● 2 Na+

RN 12392-64-2 HCAPLUS
CN Chromate(3-), bis[3-hydroxy-4-[(2-hydroxy-1-naphthalenyl)azo]-1-naphthalenesulfonato(3-)]-, disodium hydrogen (9CI) (CA INDEX NAME)

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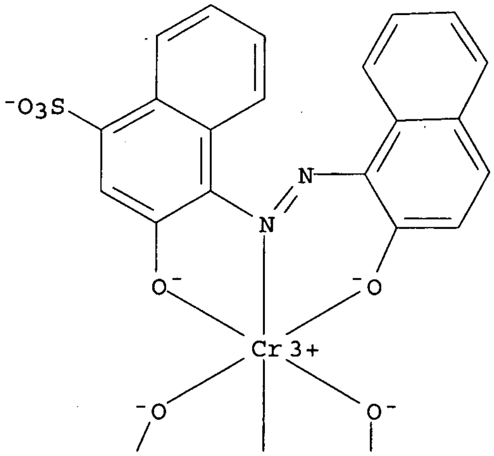

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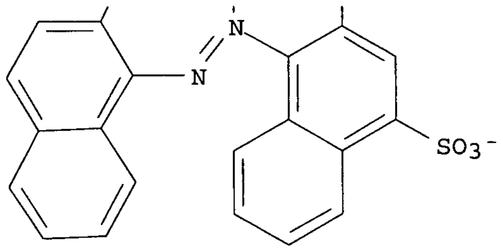


● H+

●2 Na+

L84 ANSWER 43 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1990:517017 HCAPLUS
DOCUMENT NUMBER: 113:117017
TITLE: Allylamine **polymer** fixing agents for direct dyes
INVENTOR(S): Harada, Toru; Ueda, Toshio
PATENT ASSIGNEE(S): Nitto Boseki Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02080681	A2	19900320	JP 1988-230097	19880916
JP 07023589	B4	19950315		

PRIORITY APPLN. INFO.: JP 1988-230097 19880916

ED Entered STN: 29 Sep 1990

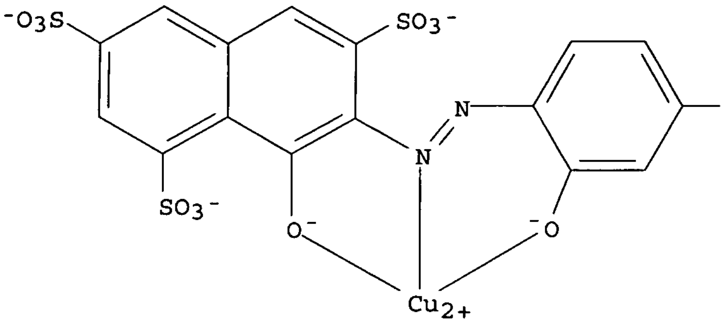
AB The title agents are homo- or **copolymers** of H2C:CHCH2NHR (R = H, C1-18 alkyl, substituted alkyl, aralkyl, cycloalkyl) or its salt. The agents produce comparable washing fastness and improved chlorine fastness without lowering light fastness compared with conventional fixing agents. Thus, a cotton cloth dyed with Sirius Supra Yellow GD and then dipped in an aqueous solution of poly(allylamine hydrochloride) was comparable in washing fastness to a control treated with dicyandiamide-diethylenetriamine condensate.

IT **71873-63-7**, Sumilight Supra Blue FGL
RL: USES (Uses)
(fixing agents for, allylamine **polymers** as)

RN 71873-63-7 HCAPLUS

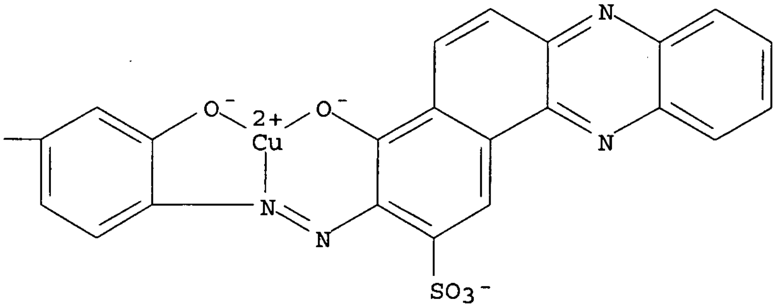
CN Cuprate(4-), [μ-[7-[[3,3'-di(hydroxy-κO)-4'-[[4-(hydroxy-κO)-2-sulfobenzo[a]phenazin-3-yl]azo-κN1][1,1'-biphenyl]-4-yl]azo-κN1]-8-(hydroxy-κO)-1,3,6-naphthalenetrisulfonato(8-)]]di-, tetrasodium (9CI) (CA INDEX NAME)

PAGE 1-A



● 4 Na^+

PAGE 1-B



L84 ANSWER 44 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1990:479291 HCAPLUS
DOCUMENT NUMBER: 113:79291
TITLE: Method for prevention of **polymer** deposition on reactors during **polymerization**
INVENTOR(S): Shimizu, Toshihide; Kaneko, Ichiro; Watanabe, Mikio
PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02047106	A2	19900216	JP 1988-199124	19880810
JP 06015565	B4	19940302		

PRIORITY APPLN. INFO.: JP 1988-199124 19880810

ED Entered STN: 01 Sep 1990

AB Title method comprises (a) coating the reactor inner wall and other portions the monomers may contact in advance with an anionic dye solution having pH ≤7 and then with an cationic **polymer** and (b) carrying out the **polymerization** Thus, the inner surfaces of a reactor were coated with a solution (pH 2.5) of C.I. Acid Black 2 in 70:30 water-MeOH and then with 0.5% aqueous solution of poly(vinylamine) at 50° and dried for 15 min. After 5 h **polymerization** of styrene and acrylonitrile at 90° in this reactor, no **polymer** scales were found, compared with 1200 g/m2 **polymer** scale deposition without the coating.

IT **6408-12-4**, C.I. Acid Black 124

RL: USES (Uses)

(coatings, for prevention of **polymer** scale deposition on reactors during **polymerization** of ethylenic monomers)

RN 6408-12-4 HCAPLUS

CN Chromate(3-), bis[3-(hydroxy-κO)-4-[[2-(hydroxy-κO)-3-[[(2-methylphenyl)amino]carbonyl]-1-naphthalenyl]azo-κN1]-7-nitro-1-naphthalenesulfonato(3-)]-, disodium hydrogen (9CI) (CA INDEX NAME)

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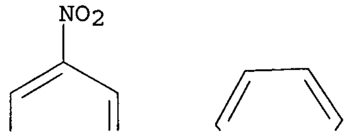

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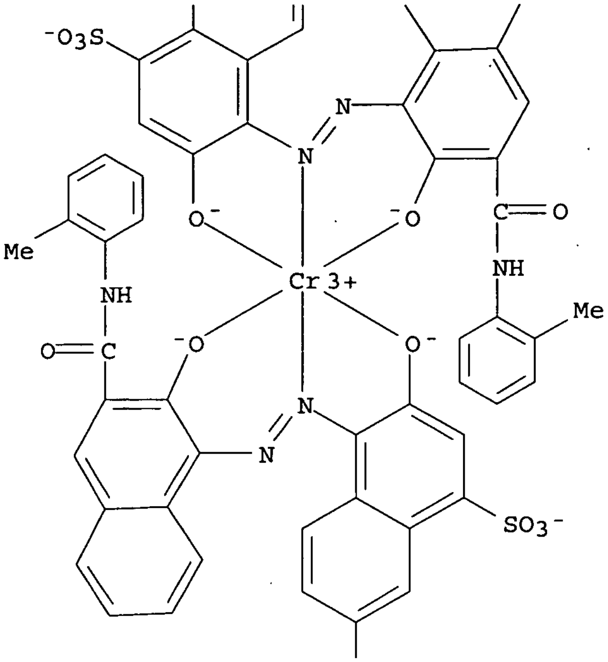

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NO_2

● H^+

● 2 Na^+

L84 ANSWER 45 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	1990:573004 HCAPLUS
DOCUMENT NUMBER:	113:173004
TITLE:	Prevention of **polymer** scale formation
INVENTOR(S):	Shimizu, Toshihide; Kaneko, Ichiro; Watanabe, Mikio
PATENT ASSIGNEE(S):	Shin-Etsu Chemical Co., Ltd., Japan
SOURCE:	Eur. Pat. Appl., 16 pp. CODEN: EPXXDW
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	1
PATENT INFORMATION:	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

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     ---------------     ----    --------    --------------------    --------
     EP 372968            A2      19900613    EP 1989-312779         19891207
     EP 372968            A3      19911023
     EP 372968            B1      19941102
         R:  DE, FR, GB
     JP 02155903          A2      19900615    JP 1988-309416         19881207
     JP 07039445          B4      19950501
     US 5034478           A       19910723    US 1989-446699         19891206
PRIORITY APPLN. INFO.:                        JP 1988-309416      A  19881207
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ED   Entered STN: 09 Nov 1990

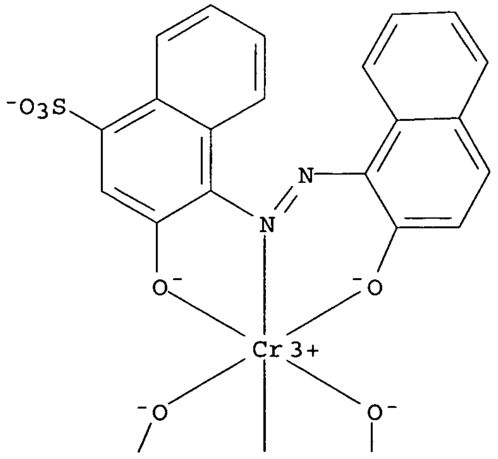
AB   Deposition of scale is prevented in **polymerization** vessels during **polymerization** of ethylenic monomers by coating the **polymerization** vessel inner wall with a solution comprising a condensate (A) of an OH group-containing phenolic compound, ≥1 compound from metal compds. and inorg. colloids, and ≥1 member from dyes and pigment. A stirred stainless steel **polymerization** vessel was coated with a 5% solution of A/Li silicate colloid/C.I. Acid Red 183 [100:100:100 (weight)] in MeOH, heated to 50° for 30 min, dried, and washed with H2O. In the vessel was introduced 400 kg H2O, 200 kg vinyl chloride, 200 g sorbitan monostearate, 200 g hydroxypropylmethyl cellulose and 15 g diisopropyl peroxydicarbonate and heated at 57° for 6 h with stirring. The **polymer** was removed and the inside of the vessel washed with H2O. Repeating the entire procedure (including applying the coating solution) gave the 25 **polymerization** runs repeatable before the quantity of scale on the inner wall was >1 g/m2.

IT   **12392-64-2**
     RL: USES (Uses)
        (coatings containing, for scale prevention in **polymerizing** ethylenic monomers)

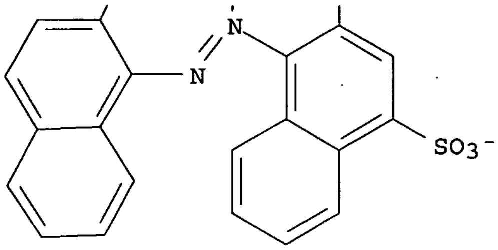
RN   12392-64-2 HCAPLUS

CN   Chromate(3-), bis[3-hydroxy-4-[(2-hydroxy-1-naphthalenyl)azo]-1-naphthalenesulfonato(3-)]-, disodium hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



● H+

●2 Na+

```
L84  ANSWER 46 OF 105  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         1990:534257  HCAPLUS
DOCUMENT NUMBER:          113:134257
TITLE:                    Preventing scale deposition during
                          polymerization of ethylenically unsaturated
                          monomers
INVENTOR(S):              Shimizu, Toshihide; Kaneko, Ichiro; Watanabe, Mikio
PATENT ASSIGNEE(S):       Shin-Etsu Chemical Co., Ltd., Japan
SOURCE:                   Eur. Pat. Appl., 15 pp.
                          CODEN: EPXXDW
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.          KIND    DATE          APPLICATION NO.          DATE
     ---------------     ----    --------      --------------------     --------
     EP 358364            A2     19900314      EP 1989-308416           19890818
     EP 358364            A3     19910605
     EP 358364            B1     19951018
         R:  BE, DE,  FR,  GB,  GR,  IT,  NL,  SE
     ZA 8906061           A      19900530      ZA 1989-6061             19890809
     NO 8903267           A      19900220      NO 1989-3267             19890815
     NO 172988            B      19930628
     NO 172988            C      19931006
     AU 8939949           A1     19900222      AU 1989-39949            19890815
     AU 612883            B2     19910718
     RO 105288            B1     19950803      RO 1989-141301           19890816
     DD 300292            A7     19920604      DD 1989-331876           19890817
     DK 8904067           A      19900220      DK 1989-4067             19890818
     FI 8903909           A      19900220      FI 1989-3909             19890818
     FI 96213             B      19960215
     FI 96213             C      19960527
```

CN 1040596	A	19900321	CN 1989-106490		19890818
BR 8904171	A	19900410	BR 1989-4171		19890818
HU 51302	A2	19900428	HU 1989-4244		19890818
HU 207105	B	19930301			
JP 02138303	A2	19900528	JP 1989-212483		19890818
JP 06055769	B4	19940727			
ES 2017406	A6	19910201	ES 1989-2897		19890818
PL 161850	B1	19930831	PL 1989-281088		19890818
CA 1330683	A1	19940712	CA 1989-608837		19890818
RU 2019546	C1	19940915	RU 1989-4614857		19890818
US 5034477	A	19910723	US 1990-512595		19900424
PRIORITY APPLN. INFO.:			JP 1988-207185	A	19880819
			US 1989-395584	B1	19890818

OTHER SOURCE(S): MARPAT 113:134257

ED Entered STN: 13 Oct 1990

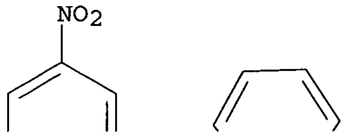
AB Coatings for **polymerization** reactors for prevention of **polymer** scale deposition comprise (a) specific anionic dyes or alkali metal or ammonium salts of sulfonated condensates of aniline (or derivs.) and nitrobenzene (or derivs.) and (b) specific cationic dyes having pH >7. A typical coating, prepared in aqueous MeOH and adjusted to pH 9 with ethylenediamine, comprised a 1:2 mixture of sulfonated PhNH2-PhNO2 condensate Na salt and C.I. Solvent Black 3. With this composition applied to the reactor walls, no **polymer** scale adhered during PVC manufacture

IT **6408-12-4**, C.I. Acid Black 124
RL: USES (Uses)
(antiscaling coatings, containing cationic dyes, for vinyl **polymn**. reactors)

RN 6408-12-4 HCAPLUS

CN Chromate(3-), bis[3-(hydroxy-κO)-4-[[2-(hydroxy-κO)-3-[[(2-methylphenyl)amino]carbonyl]-1-naphthalenyl]azo-κN1]-7-nitro-1-naphthalenesulfonato(3-)]-, disodium hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



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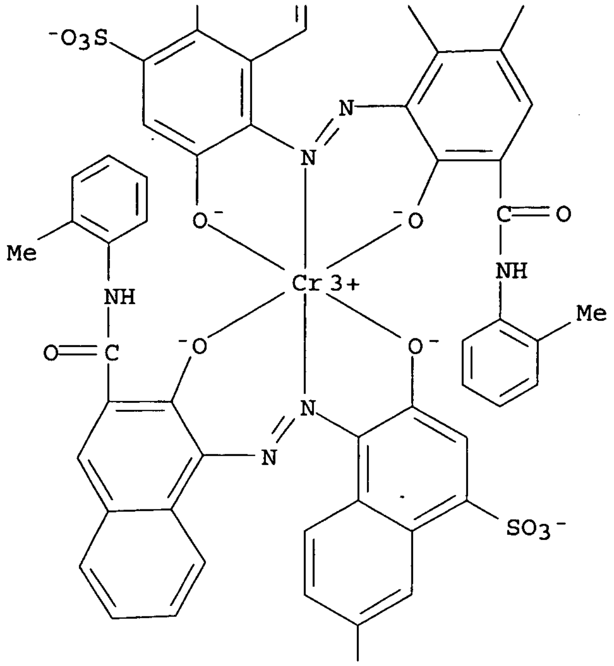

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NO_2

● H^+

●2 Na^+

L84 ANSWER 47 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1990:553278 HCAPLUS
DOCUMENT NUMBER: 113:153278
TITLE: Scale-inhibiting aqueous-organic coatings for the walls of addition **polymerization** reactors
INVENTOR(S): Shimizu, Toshihide; Kaneko, Ichiro; Watanabe, Mikio
PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 21 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 355575	A2	19900228	EP 1989-114679	19890808
EP 355575	A3	19910612		
EP 355575	B1	19941102		
R: BE, DE, FR, GB, GR, IT, NL, SE				
JP 02047103	A2	19900216	JP 1988-199119	19880810
JP 06074284	B4	19940921		
JP 02047104	A2	19900216	JP 1988-199120	19880810
JP 06015564	B4	19940302		
DK 8903877	A	19900211	DK 1989-3877	19890808
NO 8903179	A	19900430	NO 1989-3179	19890808
NO 173702	B	19931011		
NO 173702	C	19940119		
FI 8903766	A	19900211	FI 1989-3766	19890809
FI 96212	B	19960215		
FI 96212	C	19960527		
AU 8939462	A1	19900215	AU 1989-39462	19890809
AU 612873	B2	19910718		
CN 1040206	A	19900307	CN 1989-105545	19890809
CN 1035057	B	19970604		
BR 8904004	A	19900320	BR 1989-4004	19890809
ZA 8906060	A	19900530	ZA 1989-6060	19890809
HU 53142	A2	19900928	HU 1989-4081	19890809
HU 209139	B	19940328		
ES 2018383	A6	19910401	ES 1989-2830	19890809
CS 274701	B2	19910915	CS 1989-4744	19890809
DD 299593	A7	19920430	DD 1989-331614	19890809
US 5196164	A	19930323	US 1989-391199	19890809
PL 161849	B1	19930831	PL 1989-280970	19890809
CA 1323464	A1	19931019	CA 1989-607875	19890809
KR 137661	B1	19980430	KR 1989-11317	19890809
IN 176581	A	19960803	IN 1989-DE736	19890818
US 5298220	A	19940329	US 1993-703	19930105
PRIORITY APPLN. INFO.:			JP 1988-199119	A 19880810
			JP 1988-199120	A 19880810
			US 1989-391199	A3 19890809

ED Entered STN: 27 Oct 1990

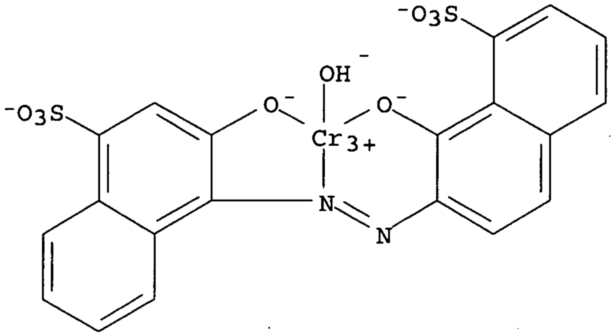
AB Scale formation is inhibited on the walls of addition **polymerization** reactors by coating the reactor's walls with an aqueous composition (pH of ±7.0) containing a water-soluble anionic dye and ≥1 of water-insol. cationic dyes and/or water-insol. N-containing organic compds. After drying, the **polymerization** is conducted and wall scale formation is not observed Thus, the walls of a **polymerization** reactor were coated with a solution containing water, acetone, C.I. Acid Black 2 (I), C.I. Solvent Black 22 (II), and the solution pH adjusted to 2.5 with phytic acid, at I/II weight ratio 100/20 and water/acetone weight ratio 100/10. After wall drying, vinyl chloride was **polymerized** in the reactor producing 2 g/m2 scale fromation, vs. 1200 g/m2 for a controlled **polymerization** conducted in the reactor whose walls were not coated with the composition

IT **6370-08-7**, C.I. Acid Blue 158 **6408-12-4**, C.I. Acid Black 124
RL: USES (Uses)
(scale-inhibiting coatings containing, for addition **polymerization** reactor walls)

RN 6370-08-7 HCAPLUS

CN Chromate(2-), hydroxy[3-(hydroxy-κO)-4-[[1-(hydroxy-κO)-8-

sulfo-2-naphthalenyl]azo-κN1]-1-naphthalenesulfonato(4-)]-,
disodium, (T-4)- (9CI) (CA INDEX NAME)



●2 Na^+

RN 6408-12-4 HCAPLUS
CN Chromate(3-), bis[3-(hydroxy-κO)-4-[[2-(hydroxy-κO)-3-[[(2-methylphenyl)amino]carbonyl]-1-naphthalenyl]azo-κN1]-7-nitro-1-naphthalenesulfonato(3-)]-, disodium hydrogen (9CI) (CA INDEX NAME)

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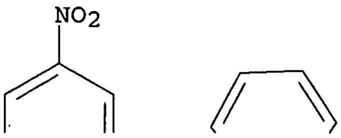

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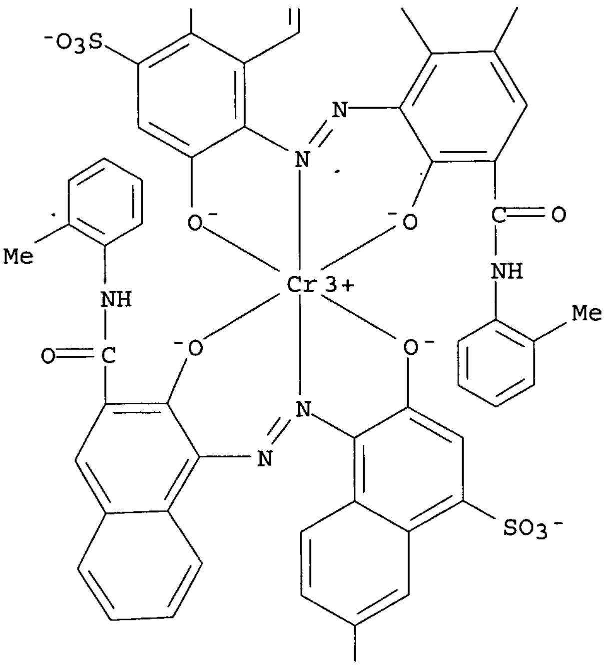


PAGE 3-A

NO_2

● H^+

●2 Na^+

L84 ANSWER 48 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1989:633898 HCAPLUS
DOCUMENT NUMBER: 111:233898
TITLE: Methods of preventing **polymer** scale formation
INVENTOR(S): Shimizu, Toshihide; Kaneko, Ichiro; Watanabe, Mikio
PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 23 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
EP 320227	A2	19890614	EP 1988-311573		19881207
EP 320227	A3	19901010			
EP 320227	B1	19940907			
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE					
CA 1289297	A1	19910917	CA 1988-584869		19881202
AU 8826614	A1	19890608	AU 1988-26614		19881206
AU 608671	B2	19910411			
US 4933399	A	19900612	US 1988-281039		19881207
ES 2058313	T3	19941101	ES 1988-311573		19881207
KR 135290	B1	19980423	KR 1988-16248		19881207
CN 1035118	A	19890830	CN 1988-109232		19881208
CN 1023324	B	19931229			
JP 02138302	A2	19900528	JP 1988-310913		19881208
JP 06051731	B4	19940706			
PRIORITY APPLN. INFO.:			JP 1987-311528	A	19871208
			JP 1988-199122	A	19880810
			JP 1988-199123	A	19880810
			JP 1988-210341	A	19880824
			JP 1988-210342	A	19880824

ED Entered STN: 23 Dec 1989

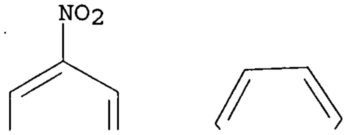
AB The title method, in **polymerization** vessel of ethylenically unsatd. monomer, comprises coating vessel inner wall with a coating solution comprising cationic dye and another coating solution comprising ≥1 component selected from anionic **polymeric** compds., amphoteric **polymeric** compound, and hydroxy-containing organic compound A **polymn**. vessel and parts coated with 0.5% CI Solvent Black 5 in MeOH solution and with 1.0% aqueous gelatin solution, after drying, was used to **polymerize** styrene with acrylonitrile for 5 h at 90°; the vessel having scale sticking 0 g/m2, vs. 1200 without the coatings.

IT **6408-12-4**, C.I. Acid Black 124
RL: USES (Uses)
(coating solns., for **polymerization** vessels,, for prevention of scale)

RN 6408-12-4 HCAPLUS

CN Chromate(3-), bis[3-(hydroxy-κO)-4-[[2-(hydroxy-κO)-3-[[(2-methylphenyl)amino]carbonyl]-1-naphthalenyl]azo-κN1]-7-nitro-1-naphthalenesulfonato(3-)]-, disodium hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



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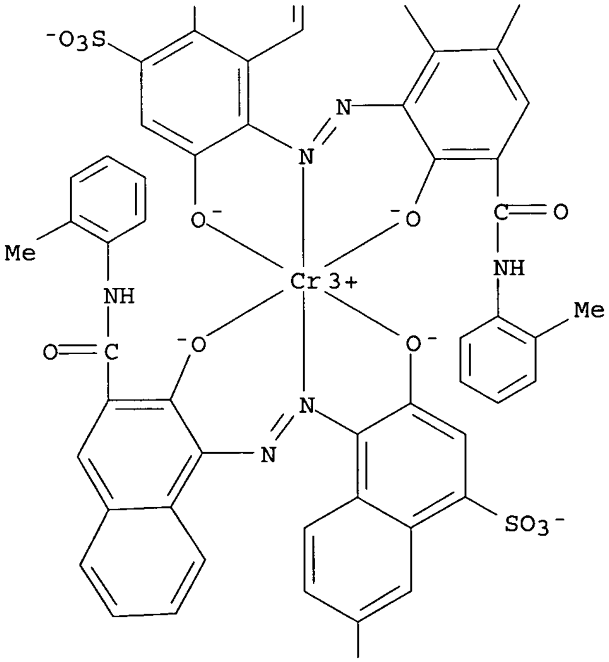

PAGE 3-A

NO_2

● H^+

●2 Na^+

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L84  ANSWER 49 OF 105  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:        1989:193593  HCAPLUS
DOCUMENT NUMBER:         110:193593
TITLE:                   Scale inhibition in manufacture of vinyl
                         polymers
INVENTOR(S):             Shimizu, Toshihide; Kaneko, Ichiro; Shimakura,
                         Yoshiteru; Watanabe, Mikio
PATENT ASSIGNEE(S):      Shin-Etsu Chemical Industry Co., Ltd., Japan
SOURCE:                  Jpn. Kokai Tokkyo Koho, 14 pp.
                         CODEN: JKXXAF
DOCUMENT TYPE:           Patent
LANGUAGE:                Japanese
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.       DATE
     ---------------     ----   --------    --------------------  --------
     JP 63156803          A2    19880629    JP 1986-303008        19861219
     JP 01029486          B4    19890612
PRIORITY APPLN. INFO.:                      JP 1986-303008        19861219
ED   Entered STN:  26 May 1989
AB   The vinyl polymers are prepared by coating pH ≥7 solns.
     containing alkali metal or NH4+ salts of sulfonic or carboxylic dyes, and
     hydroxyaroms. on reactors before polymerization  Thus, coating a 0.5%
     1:1 H2O-MeOH solution (pH 2.5) of 100:20 C.I. Acid Blue 158-catechol and
     phytic acid on the interior wall of a reactor, drying, and polymg
     CH2:CHCl in the reactor gave PVC and showed no scale adherence, vs. 1400
     g/m2 without the coating.
IT   6370-08-7, C.I. Acid blue 158
     RL: USES (Uses)
        (coatings containing aromatic alcs. and, scale inhibitors, for polymn
        . of vinyl compds.)
RN   6370-08-7  HCAPLUS
CN   Chromate(2-), hydroxy[3-(hydroxy-κO)-4-[[1-(hydroxy-κO)-8-
     sulfo-2-naphthalenyl]azo-κN1]-1-naphthalenesulfonato(4-)]-,
     disodium, (T-4)- (9CI)  (CA INDEX NAME)
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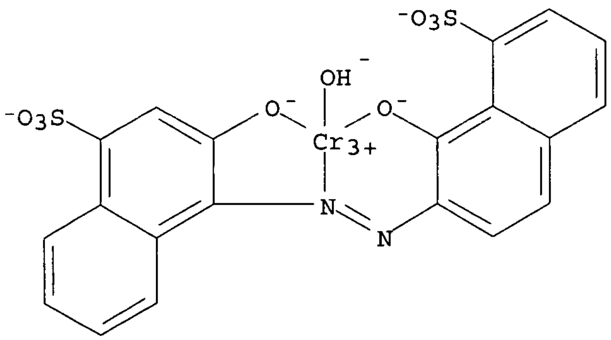


●2 Na^+

L84 ANSWER 50 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1989:77610 HCAPLUS

DOCUMENT NUMBER: 110:77610

TITLE: Manufacture of metal-complex pigment compositions for organic **polymers** and lacquers

INVENTOR(S): Lienhard, Paul; Tanner, Martin; Bugnon, Philippe

PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.

SOURCE: Eur. Pat. Appl., 49 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
EP 278913	A2	19880817	EP 1988-810073		19880208
EP 278913	A3	19910605			
R: DE, FR, GB, IT					
JP 63202669	A2	19880822	JP 1988-30671		19880212
PRIORITY APPLN. INFO.:			CH 1987-521	A	19870212

OTHER SOURCE(S): MARPAT 110:77610

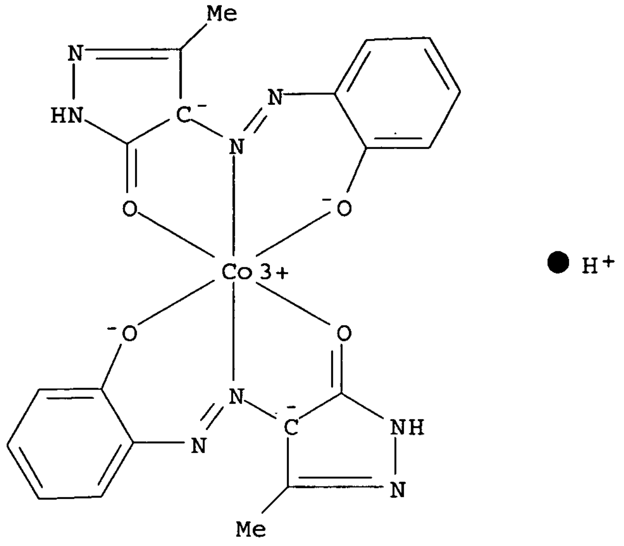
ED Entered STN: 04 Mar 1989

AB Pigment prepns. contain (A) a yellow, orange, red, brown, or violet metal-complex pigment, and (B) an anionic or cationic derivative of the metal-complex pigment at A:B = 99-80:1-20. These compns. are useful for coloring high mol. weight organic materials, and, when incorporated in lacquers, have good rheol. properties. A 10% aqueous solution (600 g) of I as a 1:1-Cu complex was heated at 70-75°, and 3 g II as a 1:1 Cu complex added, the mixture was heated for 30 min, stirred, 0.8 g $CaCl_2$ in 20 mL H_2O added, the mixture stirred for 30 min at 70-75°, and the product filtered, washed, and dried in vacuum at 80°. After sieving, an olive-colored powder was obtained, which was useful in the manufacture of a transparent yellow lacquer.

IT **118439-15-9P**
RL: PREP (Preparation)
(manufacture of pigment compns. containing, for organic **polymers**)

RN 118439-15-9 HCAPLUS

CN Cobaltate(1-), bis[2,4-dihydro-4-[(2-hydroxyphenyl)azo]-5-methyl-3H-pyrazol-3-onato(2-)]-, hydrogen (9CI) (CA INDEX NAME)



L84 ANSWER 51 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	1987:459689 HCAPLUS
DOCUMENT NUMBER:	107:59689
TITLE:	Agents and methods for preventing the adhesion of **polymer** scales
INVENTOR(S):	Shimizu, Toshihide; Kaneko, Ichiro; Watanabe, Mikio
PATENT ASSIGNEE(S):	Shin-Etsu Chemical Industry Co., Ltd., Japan
SOURCE:	Jpn. Kokai Tokkyo Koho, 15 pp. CODEN: JKXXAF
DOCUMENT TYPE:	Patent
LANGUAGE:	Japanese
FAMILY ACC. NUM. COUNT:	1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62018402	A2	19870127	JP 1985-156325	19850716
JP 06080084	B4	19941012		
PRIORITY APPLN. INFO.:			JP 1985-156325	19850716

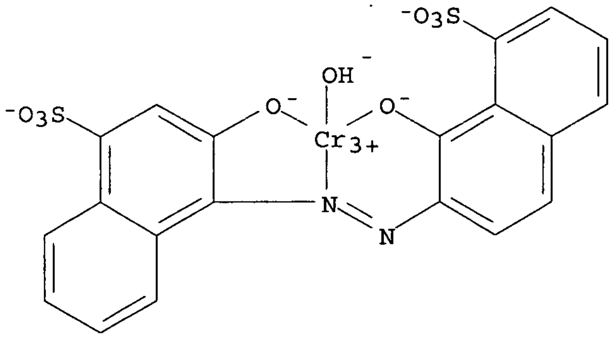
ED Entered STN: 21 Aug 1987

AB **Polymer** scale preventing agents are aromatic amine-quinone condensates, optionally containing alkali metal or ammonium salts of sulfonic acids or carboxylic acids having >5 conjugated π bonds. Thus, 2-amino diphenylamine-p-benzoquinone condensate was prepared and used as a scale preventing agent in **polymerization** of vinyl chloride.

IT **6370-08-7**, C.I. Acid Blue 158
RL: USES (Uses)
(scale inhibitors, containing aromatic amines-quinone condensates, for vinyl **polymerization**)

RN 6370-08-7 HCAPLUS

CN Chromate(2-), hydroxy[3-(hydroxy-κO)-4-[[1-(hydroxy-κO)-8-sulfo-2-naphthalenyl]azo-κN1]-1-naphthalenesulfonato(4-)]-, disodium, (T-4)- (9CI) (CA INDEX NAME)



●2 Na+

L84 ANSWER 52 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1988:6761 HCAPLUS
DOCUMENT NUMBER: 108:6761
TITLE: Effects of added metal ions on the interaction between polyvinylpyrrolidone and azo dyes carrying hydroxyl groups
AUTHOR(S): Takagishi, Toru; Matsui, Naoki
CORPORATE SOURCE: Coll. Eng., Univ. Osaka Prefect., Osaka, 591, Japan
SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (1987), 25(9), 2511-20
CODEN: JPACEC; ISSN: 0887-624X
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 09 Jan 1988
AB The extent of binding of chrome violet by poly(vinylpyrrolidone) was markedly enhanced in the presence of Co2+ ion. Ni2+ and Zn2+ ions did not perceptively influence the binding affinity of the dye. Cu2+ ion, in contrast, suppressed the binding. To investigate further the action of added metal ions, a cobalt complex dye was prepared and its binding property for the **polymer** was compared to that of chrome violet in the presence of metal ions. Some possible mechanisms for the enhancement of chrome violet binding by the addition of Co2+ ion were described.
IT **111920-51-5**
RL: PRP (Properties)
(binding of, by poly(vinylpyrrolidone), metal ion effect on)
RN 111920-51-5 HCAPLUS
CN Cobaltate(3-), bis[4-hydroxy-3-[(2-hydroxy-1-naphthalenyl)azo]benzenesulfonato(3-)]-, trihydrogen (9CI) (CA INDEX NAME)

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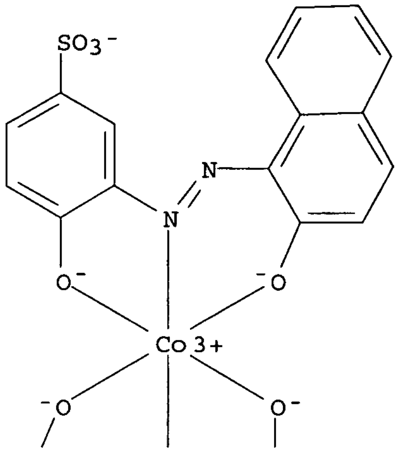

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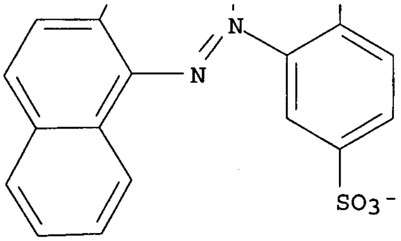

● 3 H^+

L84 ANSWER 53 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1983:471333 HCAPLUS
DOCUMENT NUMBER: 99:71333
TITLE: Preventing deposition of **polymer** scale during **polymerization** of a vinyl monomer
INVENTOR(S): Shimizu, Toshihide; Furukawa, Yasuo; Kaneko, Ichiro
PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd. , Japan
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1

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PATENT INFORMATION:

     PATENT NO.          KIND   DATE       APPLICATION NO.        DATE
     ---------------     ----   --------   --------------------   --------
     WO 8301452           A1    19830428   WO 1982-JP414          19821019
         W:  NO, SU, US
         RW: BE, DE, FR, GB, NL
     JP 58069203          A2    19830425   JP 1981-167699         19811020
     JP 01038121          B4    19890811
     IN 157818            A     19860628   IN 1982-CA1206         19821015
     EP 91965             A1    19831026   EP 1982-903059         19821019
     EP 91965             B1    19870318
         R:  BE, DE, FR, GB, NL
     NO 8302086           A     19830609   NO 1983-2086           19830609
     NO 158022            B     19880321
     NO 158022            C     19880629
     US 4612354           A     19860916   US 1985-764508         19850809
PRIORITY APPLN. INFO.:                     JP 1981-167699      A  19811020
                                           WO 1982-JP414       A  19821019
                                           US 1983-514810      A1 19830614
```

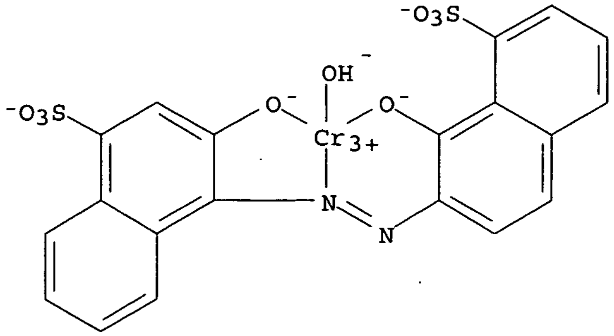
ED Entered STN: 12 May 1984

AB Formation of **polymer** scale during suspension **polymerization** of vinyl compds. is prevented by coating the inside surfaces of **polymerization** reactors with aqueous solns. of sulfonic acid- or carboxylic acid salt-type dyes or salts of organic sulfonic acids or carboxylic acids having at least one pair of conjugated double bonds and poly(vinyl alc.) (I) [9002-89-5] and drying. Thus, a stainless steel reactor was coated on the interior with an aqueous solution containing 0.5% C.I. Acid Black 2 [8005-03-6] and 0.08% I, dried 1 min at 90° to form a 0.1 g/m2 coating, and washed with H2O. A mixture of partially saponified poly(vinyl acetate) 150, methylcellulose 50, H2O 500,000, vinyl chloride 250,000, and dilauroyl peroxide 500 g was stirred in the above reactor at 50° for 10 h to give PVC [9002-86-2] without formation of scale.

IT **6370-08-7**
RL: USES (Uses)
(scale prevention by poly(vinyl alc.) and, in suspension **polymn**. of vinyl compds.)

RN 6370-08-7 HCAPLUS

CN Chromate(2-), hydroxy[3-(hydroxy-κO)-4-[[1-(hydroxy-κO)-8-sulfo-2-naphthalenyl]azo-κN1]-1-naphthalenesulfonato(4-)]-, disodium, (T-4)- (9CI) (CA INDEX NAME)



● 2 Na^+

```
L84  ANSWER 54 OF 105  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         1984:121777  HCAPLUS
DOCUMENT NUMBER:          100:121777
TITLE:                    Preventing scale deposition in the
                          polymerization of ethylenically unsaturated
                          monomers
INVENTOR(S):              Shimizu, Toshihide; Furukawa, Yasuo; Kaneko, Ichiro
PATENT ASSIGNEE(S):       Shin-Etsu Chemical Industry Co., Ltd. , Japan
SOURCE:                   Eur. Pat. Appl., 45 pp.
                          CODEN: EPXXDW
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.          KIND    DATE          APPLICATION NO.         DATE
     ---------------     ----    --------      --------------------    --------
     EP 96319             A1     19831221      EP 1983-105292          19830527
     EP 96319             B1     19860326
         R:  BE, DE, FR, GB, IT, NL
     JP 58210902          A2     19831208      JP 1982-92415           19820531
     JP 61052161          B4     19861112
     CA 1222347           A1     19870526      CA 1983-429144          19830530
PRIORITY APPLN. INFO.:                         JP 1982-92415        A  19820531
ED   Entered STN:  12 May 1984
```

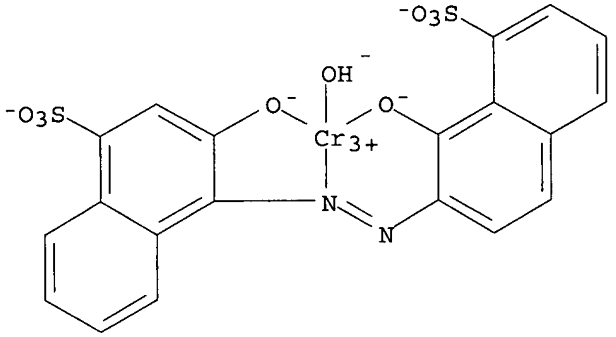
AB **Polymer** scale buildup on the reactor walls in the **polymn**. of ethylenically unsatd. monomers is prevented by coating the inner surfaces of the reactor with an aqueous coating composition comprising an organic dye of sulfonic or carboxylic acid in the form of an alkali metal or ammonium salt and an aqueous colloidal dispersion of an inorg. material. Thus, the inner surfaces and the stirrer of a stainless steel reactor were coated with an aqueous solution of 0.5% C. I. Acid Black 2 [8005-03-6] containing 1.0% colloidal $Fe(OH)_3$ to give 0.2 g coating/m2. A mixture of partially saponified poly(vinyl alc.) 150, hydroxypropyl methyl cellulose 50, and bis(2-ethylhexyl) peroxydicarbonate [16111-62-9] 100 g in 500 kg water and 250 kg vinyl chloride was heated at 50° for 10 h in the coated reactor. No scale deposition was observed after completion of the

polymerization However, 200 g/cm2 scale was deposited on the noncoated reactor using a similar coating composition not containing Fe(OH)3.

IT **6370-08-7**
RL: USES (Uses)
(coatings, for scale prevention in vinyl **polymerization**)

RN 6370-08-7 HCAPLUS

CN Chromate(2-), hydroxy[3-(hydroxy-κO)-4-[[1-(hydroxy-κO)-8-sulfo-2-naphthalenyl]azo-κN1]-1-naphthalenesulfonato(4-)]-, disodium, (T-4)- (9CI) (CA INDEX NAME)



●2 Na+

L84 ANSWER 55 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1980:59424 HCAPLUS
DOCUMENT NUMBER: 92:59424
TITLE: Prevention of scale formation during suspension **polymerization** of vinyl compounds
INVENTOR(S): Koyanagi, Shunichi; Hasegawa, Niichiro; Shimizu, Toshihide; Kaneko, Ichiro; Katsushima, Sensaku
PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
JP 54119584	A2	19790917	JP 1978-27063		19780309
JP 58011884	B4	19830305			
PRIORITY APPLN. INFO.:			JP 1978-27063	A	19780309

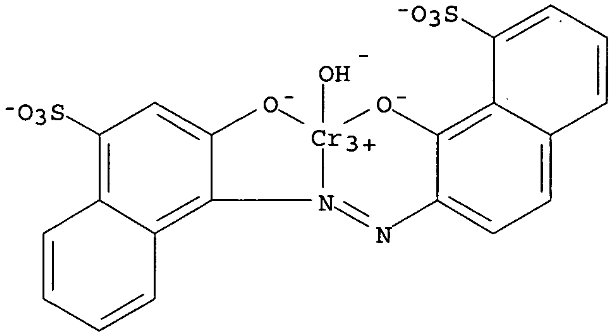
ED Entered STN: 12 May 1984

AB The interiors of **polymerization** reactors for vinyl compds. are coated with solns. of polar organic compds. having conjugated double bonds in organic solvents and further coated with aqueous solns. of such compds. at pH <7 to prevent scale formation during **polymerization** Thus, the interior of a stainless steel autoclave is coated with a 0.5% C.I. Solvent Black 7 (I) [8005-02-5] in MeOH, dried, washed with H2O, coated with 0.1% aqueous 100:30 C.I. Acid Black 2 [8005-03-6]-C.I. Basic Orange 14 [65-61-2] adjusted to pH 2.5, dried, and washed with H2O. A mixture of vinyl chloride 26, H2O 52, poly(vinyl alc.) 0.026, and radical initiator 0.008 kg was stirred 10 h at 57° to give PVC [9002-86-2]. The reactor was used for >30 runs without scale formation, compared with 4 when coated with I alone.

IT **6370-08-7**
RL: USES (Uses)
(scale prevention by, on reactors for suspension **polymerization**)

RN 6370-08-7 HCAPLUS

CN Chromate(2-), hydroxy[3-(hydroxy-κO)-4-[[1-(hydroxy-κO)-8-sulfo-2-naphthalenyl]azo-κN1]-1-naphthalenesulfonato(4-)]-, disodium, (T-4)- (9CI) (CA INDEX NAME)



●2 Na^+

L84 ANSWER 56 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1978:144345 HCAPLUS
DOCUMENT NUMBER: 88:144345
TITLE: Ferromagnetic toner
INVENTOR(S): Gorondy, Emery John
PATENT ASSIGNEE(S): du Pont de Nemours, E. I., and Co., USA
SOURCE: Ger. Offen., 83 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
DE 2714414	A1	19771013	DE 1977-2714414		19770331
DE 2714414	B2	19800828			
DE 2714414	C3	19810416			
US 4105572	A	19780808	US 1976-672554		19760331
PRIORITY APPLN. INFO.:			US 1976-672554	A	19760331

ED Entered STN: 12 May 1984

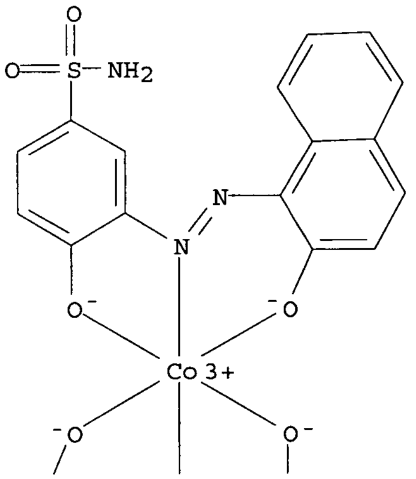
AB A ferromagnetic toner for a magnetic printing process is composed of ≥1 ferromagnetic component, ≥1 dye and/or a chemical processing agent, and a readily meltable, water-soluble or water-insol. resin which encapsulates the above-mentioned materials. Thus, a dispersion containing a 20% aqueous alkaline solution of a polyvinyl acetate **copolymer** resin 450, Fe 108, Fe_3O_4 108, a dispersion of C. I. Disperse Blue 56 24 in water 455, and water 500 parts was mixed and then spray-dried to give toner particles with a particle size of 2-100 μ. The toner particles were then sieved with a sieve having 75 μ openings, and SiO2 0.2% added to improve the flow properties of the toner. An aluminized polyester foil carrying an overcoating of magnetic CrO2 was then imagewise flash-exposed to demagnetize the CrO2 in the nonimge areas, and the latent magnetic image was then developed by using the toner powder. The image was electrostatically transferred to a paper or textile support and fixed thereon by heat and pressure.

IT **50525-57-0**
RL: USES (Uses)
(ferromagnetic toner containing magnetic particle, **polymer** binder, and, for magnetic copying process with subsequent image transfer)

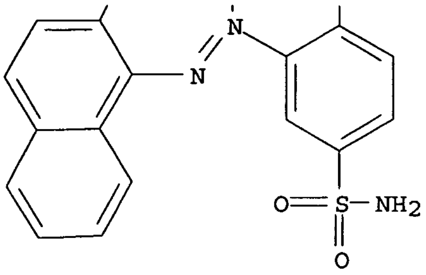
RN 50525-57-0 HCAPLUS

CN Cobaltate(1-), bis[4-(hydroxy-κO)-3-[[2-(hydroxy-κO)-1-naphthalenyl]azo-κN1]benzenesulfonamidato(2-)]-, hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



● H^+

L84 ANSWER 57 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	1977:157000 HCAPLUS
DOCUMENT NUMBER:	86:157000
TITLE:	Diffusion of some dyes in aqueous **polymer** solutions
AUTHOR(S):	Farag, Ahmed A.; Sedahmed, G. H.; Farag, H. A.; Nagawi, A. F.
CORPORATE SOURCE:	Chem. Eng. Dep., Alexandria Univ., Alexandria, Egypt
SOURCE:	British Polymer Journal (1976), 8(2), 54-7 CODEN: BPOJAB; ISSN: 0007-1641
DOCUMENT TYPE:	Journal
LANGUAGE:	English

ED Entered STN: 12 May 1984

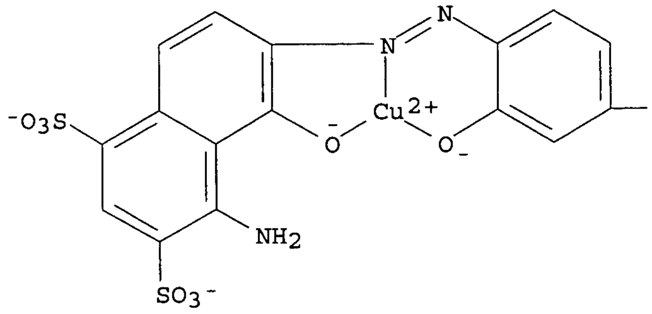
AB The diffusion of Direct Blue 76 [**16143-79-6**] and C.I. Acid Orange 7 in dilute solns. of polyacrylamide [9003-05-8], poly(ethylene oxide) [25322-68-3], and CM-cellulose [9004-32-4] was studied by the capillary method. The diffusion coeffs. in solns. containing CM-cellulose and polyacrylamide were higher and lower, resp., than those in pure H2O. In poly(ethylene oxide)-containing solns. the diffusion coeffs. of the direct and acid dye were lower and higher, resp., than those in pure H2O. The diffusion coeffs. of both dyes in poly(ethylene oxide) and polyacrylamide solns. decreased with increasing **polymer** concentration whereas in CM-cellulose solns. the diffusion coeffs. increased with increase in **polymer** concentration The diffusion coeffs. of both dyes in all solns. obeyed the Arrhenius equation.

IT **16143-79-6**
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(diffusion of, in aqueous **polymer** solns.)

RN 16143-79-6 HCAPLUS

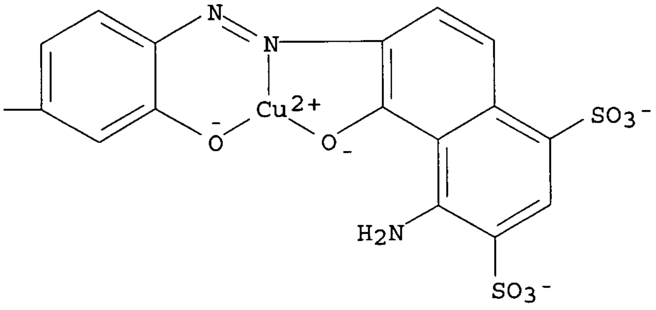
CN Cuprate(4-), [μ-[[6,6'-[[3,3'-di(hydroxy-κO)[1,1'-biphenyl]-4,4'-diyl]bis(azo-κN1)]bis[4-amino-5-(hydroxy-κO)-1,3-naphthalenedisulfonato]](8-)]]di-, tetrasodium (9CI) (CA INDEX NAME)

PAGE 1-A



●4 Na^{+}

PAGE 1-B



L84 ANSWER 58 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	1974:132760 HCAPLUS
DOCUMENT NUMBER:	80:132760
TITLE:	**Catalytic** mono- and cooligomerization of olefins
INVENTOR(S):	Mix, Hermann; Kurras, Erhard; Wilcke, Friedrich W.; Reihsig, Jonathan; Schulz, Wolfgang; Fuhrmann, Hans; Grassert, Ingrid; Fuchs, Wilfried; Meissner, Jochen
SOURCE:	Ger. (East), 30 pp. CODEN: GEXXA8
DOCUMENT TYPE:	Patent
LANGUAGE:	German
FAMILY ACC. NUM. COUNT:	1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DD 99556	Z	19730820	DD 1970-149546	19700817

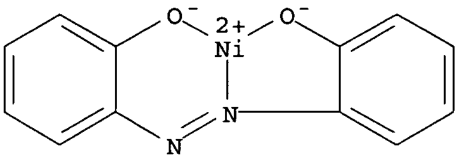
PRIORITY APPLN. INFO.: DD 1970-149546 A1 19700817

ED Entered STN: 12 May 1984

AB Olefins were oligomerized (predominantly dimerized) or codimerized over

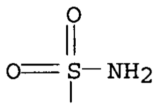
catalysts composed of Et2ClAl-EtCl2Al and a Ni complex of an aldimine or azo compound with other complexing atoms to permit a bi-, tri- or tetradentate chelate. Thus, propene was passed into 100 ml absolute PhCl containing 60 mg bis(salicylaldimino)nickel at 0° until the solution was propene-saturated, then 1.13 ml. Et2ClAl-EtCl2Al was added dropwise and, after 30 min stirring at <20°, 3 ml concentrate KOH was added to give 49 g product of which 42 g was hexene (39.1% n-hexene) and 7 g was nonene.

IT **17835-75-5**
RL: **CAT (Catalyst use)**; USES (Uses)
(**catalysts**, for oligomerization and codimerization of olefins)
RN 17835-75-5 HCAPLUS
CN Nickel, bis[[2,2'-azobis[phenolato]](2-)-N,O,O']- (9CI) (CA INDEX NAME)



L84 ANSWER 59 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1969:525946 HCAPLUS
DOCUMENT NUMBER: 71:125946
TITLE: Reaction of acid metal-complex dyes and poly(vinyl alcohol)
AUTHOR(S): Dergacheva, L. A.; Kharkharov, A. A.; Kalontarov, I. Ya.; Kopitsya, N. I.; Rakitin, I. I.
CORPORATE SOURCE: Inst. Khim., Dushanbe, USSR
SOURCE: Doklady Akademii Nauk Tadzhikskoi SSR (1969), 12(4), 32-6
CODEN: DANTAL; ISSN: 0002-3469
DOCUMENT TYPE: Journal
LANGUAGE: Russian
ED Entered STN: 12 May 1984
AB The reactions of several metal-complex dyes of the general formulas I and II with poly(vinyl alc.) (III) were studied by ir spectroscopy, E.P.R. spectroscopy, and physicochem. anal. Absorption bands obtained from I(R = SO3Na) (IV) and II(R1 = Cl, R2 = H, R3 = SO2NH2, M = Co) (V) indicated that introduction of III brought about changes in the spectra of dyes similar to those caused by EtOH, i.e., a minor bathochromic shift as the concentration of EtOH increased. Introduction of IV, I(R = H), II(R1 = SO2NH2, R2 = NHAc, R3 = H, M = Cr), II(R1 = SO2NHMe, R2 = NHAc, R3 = H, M = Cr), and V in various concns. led to increased solution viscosity, presumably due to addition of dye mols. to the flexible III chain. E.P.R. and ir spectra suggested that the dyes reacted with the **polymer**; the exact nature of the reaction would, however, require further investigations.
IT **24256-57-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with vinyl alc. **polymers**)
RN 24256-57-3 HCAPLUS
CN Cobaltate(1-), [5-[(5-chloro-2-hydroxyphenyl)azo]-6-hydroxy-2-naphthalenesulfonamidato(2-)][1-[(5-chloro-2-hydroxyphenyl)azo]-2-naphtholato(2-)]-, sodium (8CI) (CA INDEX NAME)

PAGE 1-A



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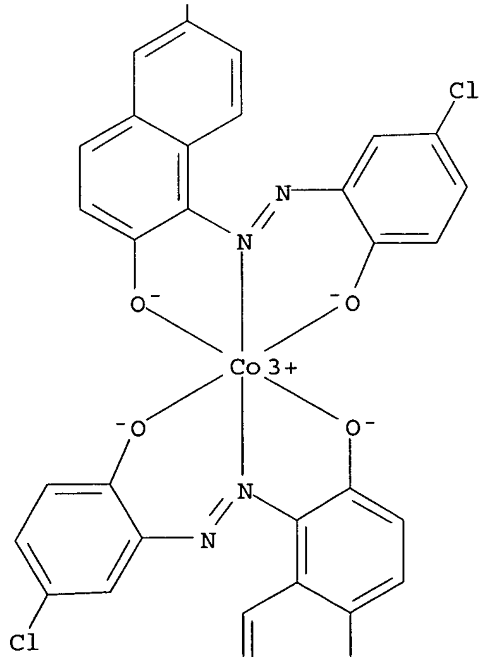
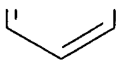


PAGE 3-A



● Na+

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SCISEARCH, WPIX' - CONTINUE? (Y)/N:y


L84  ANSWER 60 OF 105  USPATFULL on STN
ACCESSION NUMBER:        2005:69671  USPATFULL
TITLE:                   Process for insertion of acrylonitrile into a
                         metal-carbon bond
INVENTOR(S):             Weiss, Thomas, Mannheim, GERMANY, FEDERAL REPUBLIC OF
                         Jordan, Richard, Chicago, IL, UNITED STATES
                         Rieger, Bernhard, Oberelchingen, GERMANY, FEDERAL
                         REPUBLIC OF
                         Piefer, Claudia, Langenau, GERMANY, FEDERAL REPUBLIC OF

                              NUMBER        KIND    DATE
                         ---------------- ------ --------
PATENT INFORMATION:      US 2005059812      A1   20050317
APPLICATION INFO.:       US 2004-919722     A1   20040816  (10)

                                NUMBER         DATE
                         ------------------ --------
PRIORITY INFORMATION:    DE 2003-10342571   20030915
DOCUMENT TYPE:           Utility
FILE SEGMENT:            APPLICATION
LEGAL REPRESENTATIVE:    LANXESS CORPORATION, PATENT DEPARTMENT/ BLDG 14, 100
                         BAYER ROAD, PITTSBURGH, PA, 15205-9741
NUMBER OF CLAIMS:        4
EXEMPLARY CLAIM:         1
NUMBER OF DRAWINGS:      1 Drawing Page(s)
LINE COUNT:              1096
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB       The present invention relates to compounds with a metal-carbon bond
         suitable for insertion of acrylonitrile, a process for the preparation
         of these compounds and the use of these compounds for further insertions
         of acrylonitrile and/or other monomers.
IT   847908-24-1P
          (crystal structure; alkylmetal amido complex preparation and process for
          insertion of acrylonitrile into a palladium-carbon bond)
RN   847908-24-1  USPATFULL
CN   INDEX NAME NOT YET ASSIGNED
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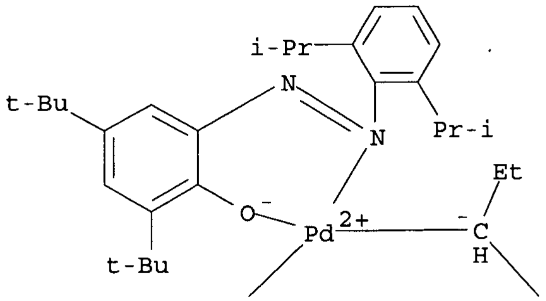
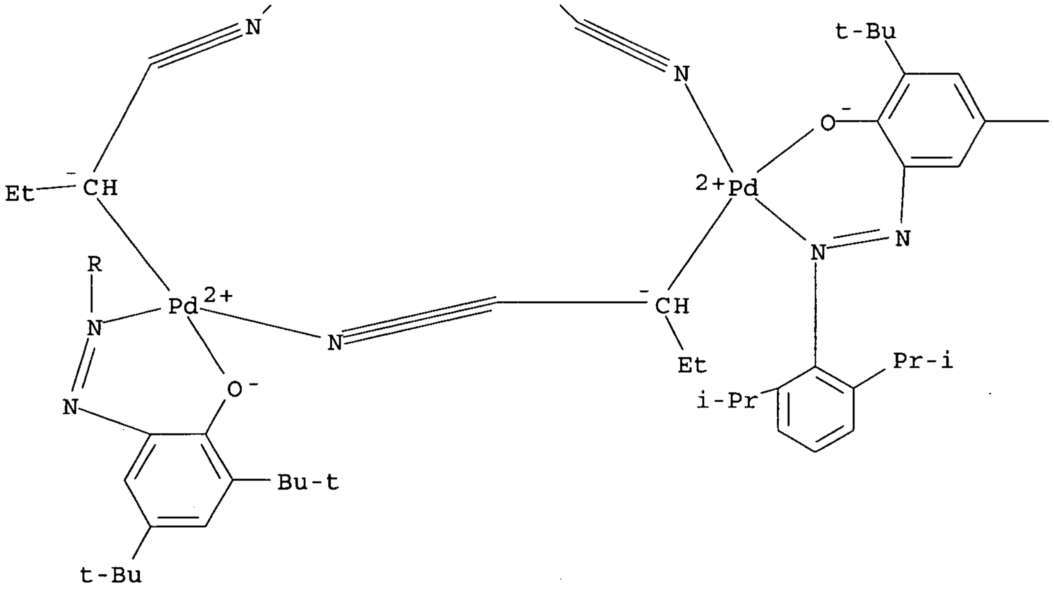
PAGE 1-A



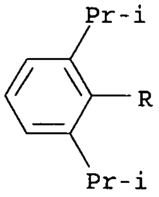
PAGE 2-A



PAGE 2-B

— Bu-t

PAGE 3-A



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SCISEARCH, WPIX' - CONTINUE? (Y)/N:y


L84  ANSWER 61 OF 105  USPATFULL on STN
ACCESSION NUMBER:        2004:247066  USPATFULL
TITLE:                   Electrophotographic printing method, monoazo iron
                         complex compound, charge controlling agent using the
                         same and toner using the charge controlling agent
INVENTOR(S):             Otsuka, Hideyuki, Fukushima, JAPAN
                         Nemoto, Kazuo, Fukushima, JAPAN
                         Otani, Shinji, Shizuoka, JAPAN
                         Suzuki, Noriyuki, Fukushima, JAPAN
                         Yamada, Eisuke, Fukushima, JAPAN
                         Okubo, Masaki, Fukushima, JAPAN
PATENT ASSIGNEE(S):      Hodogaya Chemical Co., Ltd., Kawasaki-shi, JAPAN
                         (non-U.S. corporation)

                              NUMBER        KIND    DATE
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PATENT INFORMATION:      US 2004191660       A1   20040930
APPLICATION INFO.:       US 2003-714853      A1   20031118  (10)

                                NUMBER        DATE
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PRIORITY INFORMATION:    JP 2003-96578       20030331
                         JP 2003-201262      20030724
                         JP 2003-207208      20030811
                         JP 2003-356674      20031016
DOCUMENT TYPE:           Utility
FILE SEGMENT:            APPLICATION
LEGAL REPRESENTATIVE:    OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C., 1940
                         DUKE STREET, ALEXANDRIA, VA, 22314
NUMBER OF CLAIMS:        26
EXEMPLARY CLAIM:         1
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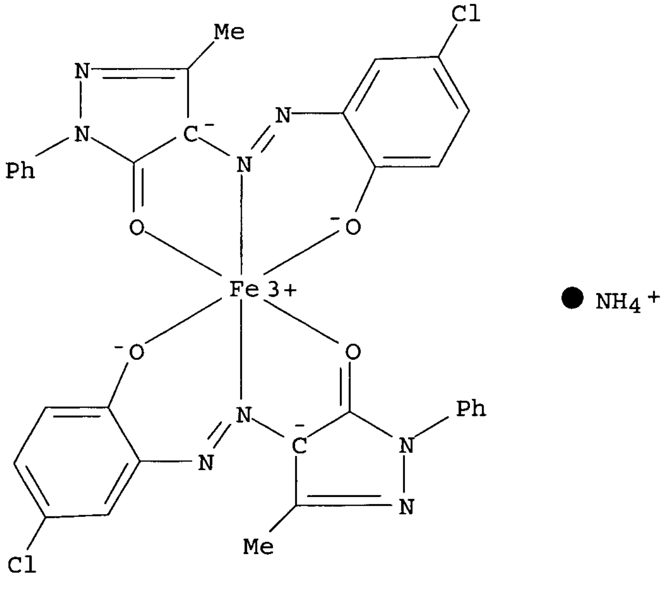
NUMBER OF DRAWINGS: 14 Drawing Page(s)
LINE COUNT: 2286
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An electrophotographic printing method which comprises using a charge controlling agent containing a monoazo iron complex compound of the formula (1) as an effective component, ##STR1##

wherein A.sub.1, A.sub.2, B.sub.1 and B.sub.2 are respectively independently H, an alkyl group or a halogen atom, J is H, an alkali metal, NH.sub.4 or an alkylammonium, they may be two or more kinds, X.sub.1 and X.sub.2 are respectively independently H, an alkyl group or a halogen atom, and Y.sub.1 and Y.sub.2 are respectively independently H, an alkyl group or an aromatic group which may have a substituent, provided that a case in which A.sub.1, A.sub.2, B.sub.1, B.sub.2, X.sub.1, X.sub.2, Y.sub.1, and Y.sub.2 are hydrogen at the same time is excluded.

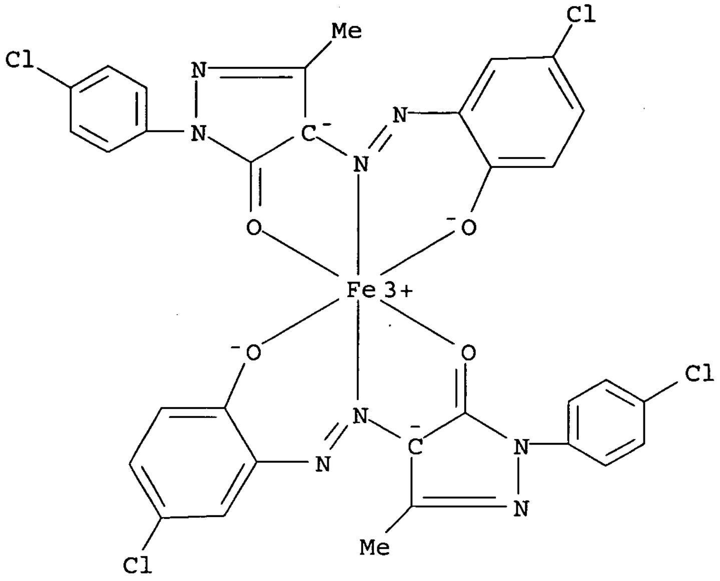
IT **672925-71-2P** **672925-72-3DP**, solid solution containing **672925-72-3P** **672925-73-4DP**, solid solution containing **672925-73-4P** **672925-74-5P** **672925-75-6P** **672925-76-7P** **672925-77-8P** **672925-78-9P** **672925-79-0P** **672925-80-3P** **672925-81-4P** **672925-82-5P** **672925-83-6P** **672925-84-7P** **672925-85-8DP**, solid solution containing **672925-85-8P** **672925-86-9P** **672925-87-0P** **672925-89-2P** **672925-90-5P** **672925-91-6P** **672925-92-7P**
(monoazo metal complex compound for charge-controlling agent)

RN 672925-71-2 USPATFULL
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)-κO3]-, ammonium (9CI) (CA INDEX NAME)



RN 672925-72-3 USPATFULL
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-(4-chlorophenyl)-2,4-dihydro-5-methyl-3H-pyrazol-3-onato(2-)-κO3]-, ammonium (9CI) (CA INDEX NAME)

PAGE 1-A

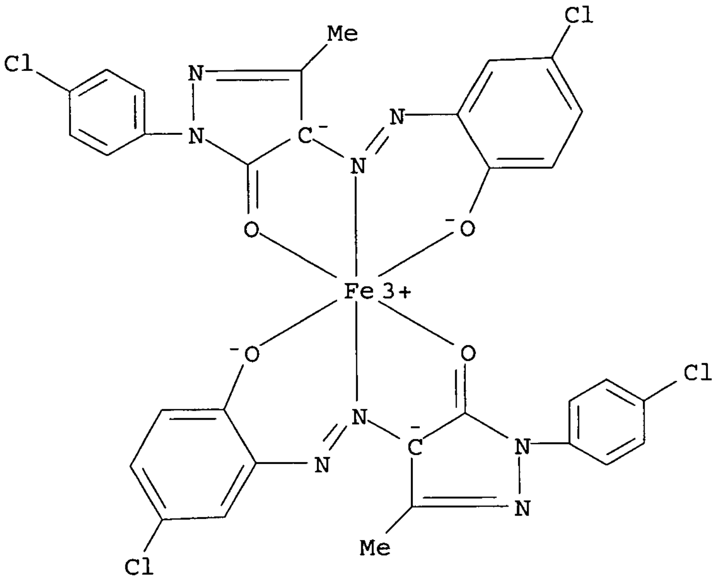


PAGE 2-A

● NH_4^+

RN 672925-72-3 USPATFULL
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-(4-chlorophenyl)-2,4-dihydro-5-methyl-3H-pyrazol-3-onato(2-)-κO3]-, ammonium (9CI) (CA INDEX NAME)

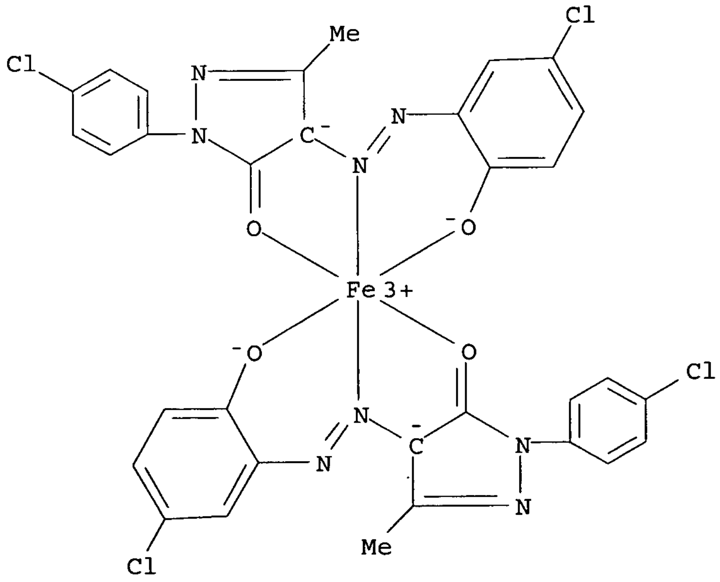
PAGE 1-A



PAGE 2-A

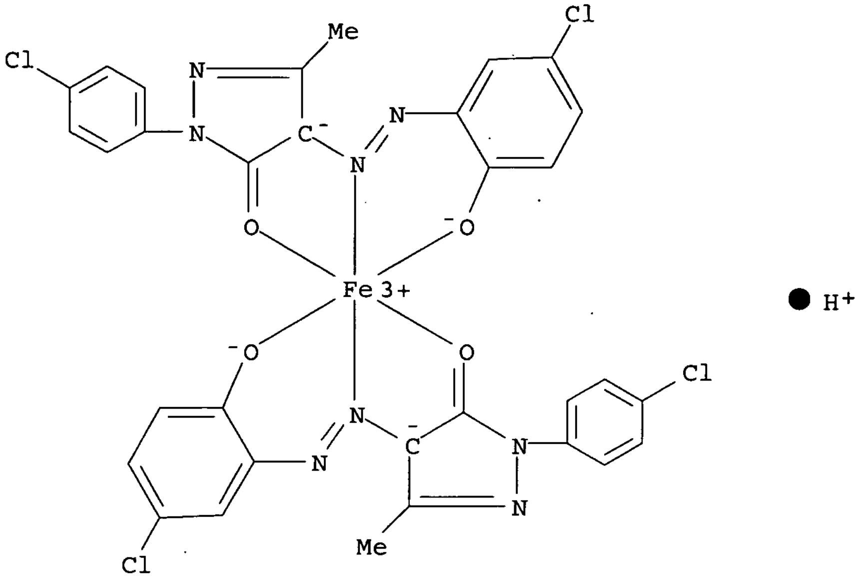
● NH_4^+

RN 672925-73-4 USPATFULL
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-(4-chlorophenyl)-2,4-dihydro-5-methyl-3H-pyrazol-3-onato(2-)-κO3]-, hydrogen (9CI) (CA INDEX NAME)

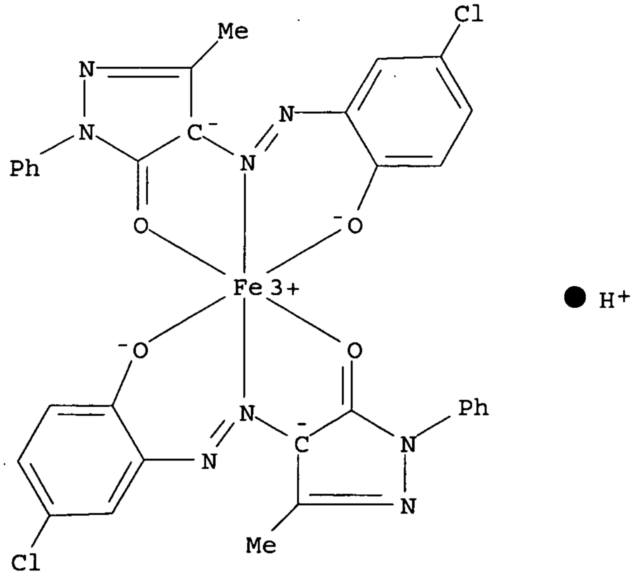


● H^+

RN 672925-73-4 USPATFULL
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-(4-chlorophenyl)-2,4-dihydro-5-methyl-3H-pyrazol-3-onato(2-)-κO3]-, hydrogen (9CI) (CA INDEX NAME)



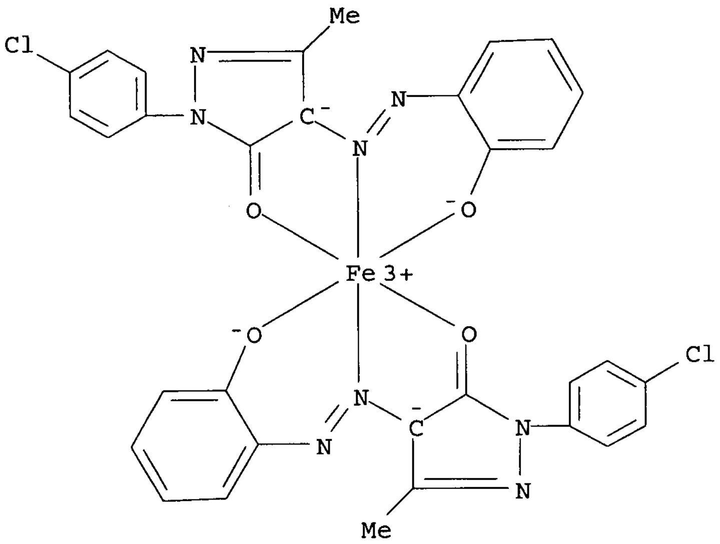
RN 672925-74-5 USPATFULL
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)-κO3]-, hydrogen (9CI) (CA INDEX NAME)



RN 672925-75-6 USPATFULL

CN Ferrate(1-), bis[2-(4-chlorophenyl)-2,4-dihydro-4-[[2-(hydroxy-κO)phenyl]azo-κN1]-5-methyl-3H-pyrazol-3-onato(2-)-κO3]-, ammonium (9CI) (CA INDEX NAME)

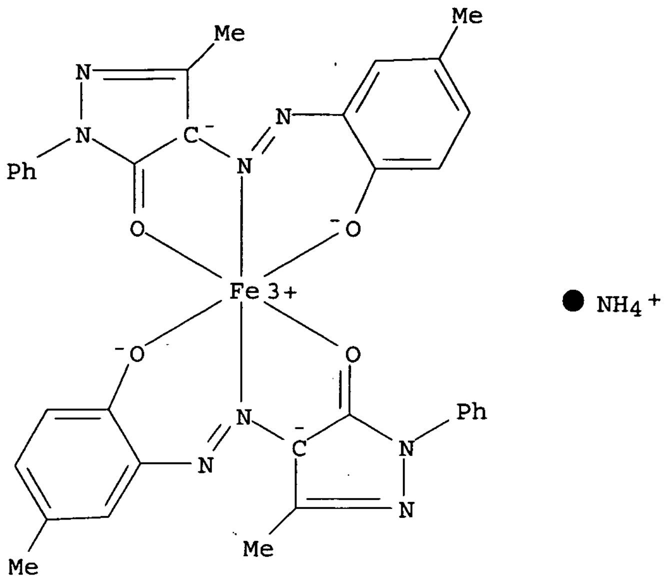
PAGE 1-A



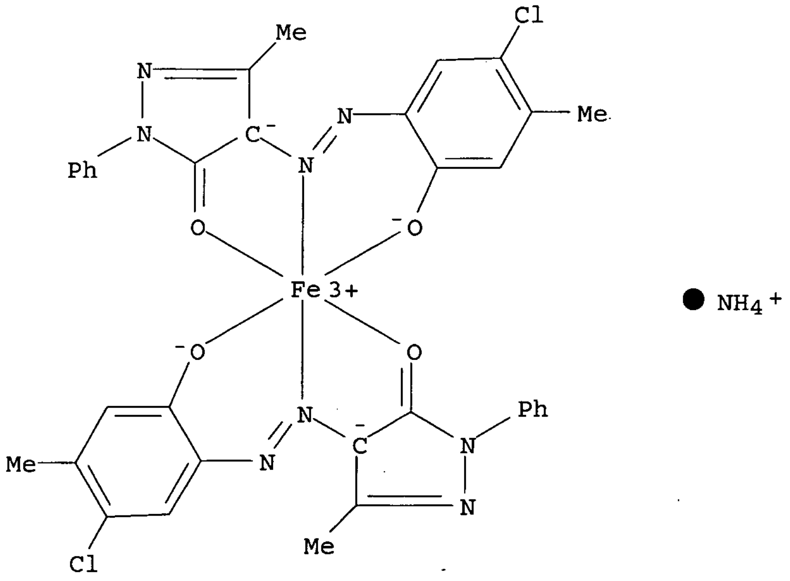
PAGE 2-A

● NH_4^+

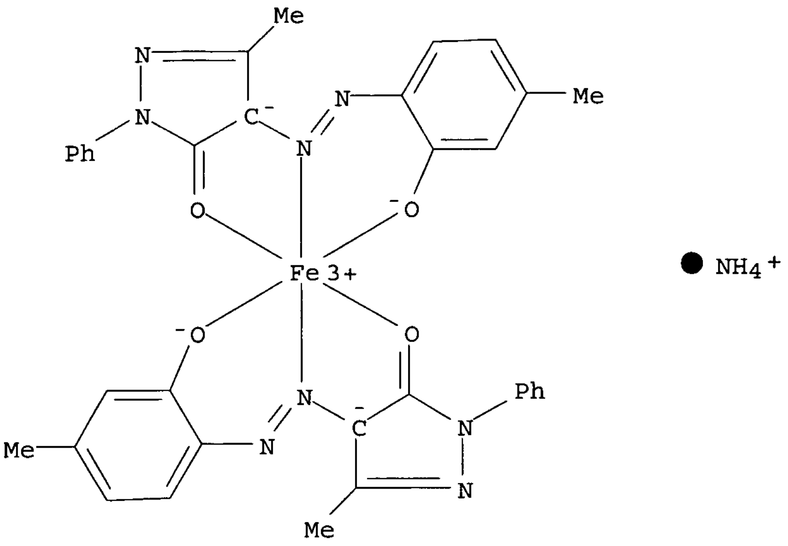
RN 672925-76-7 USPATFULL
CN Ferrate(1-), bis[2,4-dihydro-4-[[2-(hydroxy-κO)-5-methylphenyl]azo-κN1]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)-κO3]-, ammonium (9CI) (CA INDEX NAME)



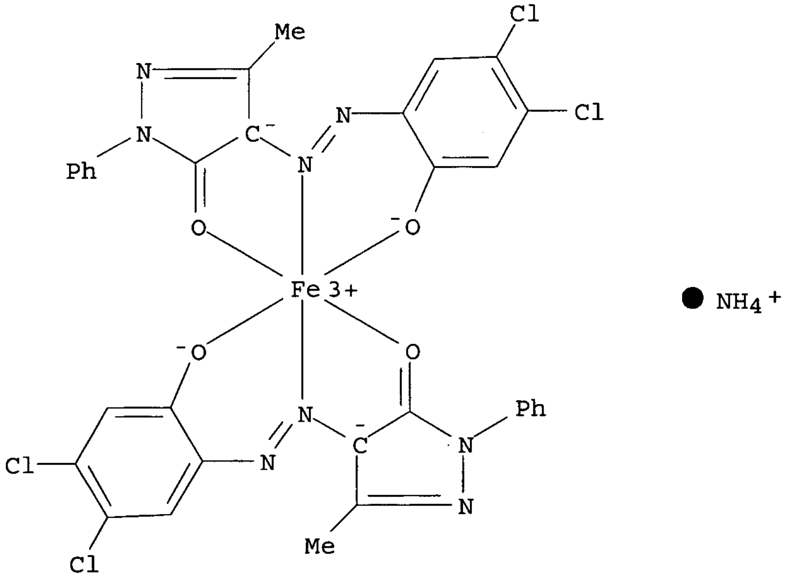
RN 672925-77-8 USPATFULL
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)-4-methylphenyl]azo-κN1]-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)-κO3]-, ammonium (9CI) (CA INDEX NAME)



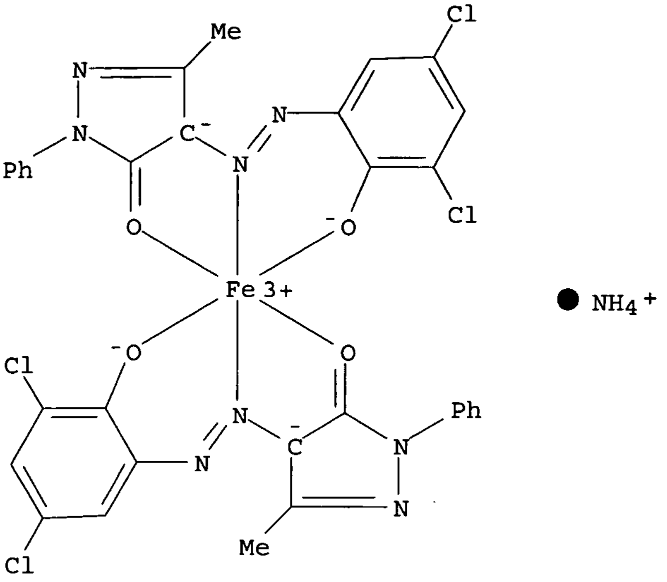
RN 672925-78-9 USPATFULL
CN Ferrate(1-), bis[2,4-dihydro-4-[[2-(hydroxy-κO)-4-methylphenyl]azo-κN1]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)-κO3]-, ammonium (9CI) (CA INDEX NAME)



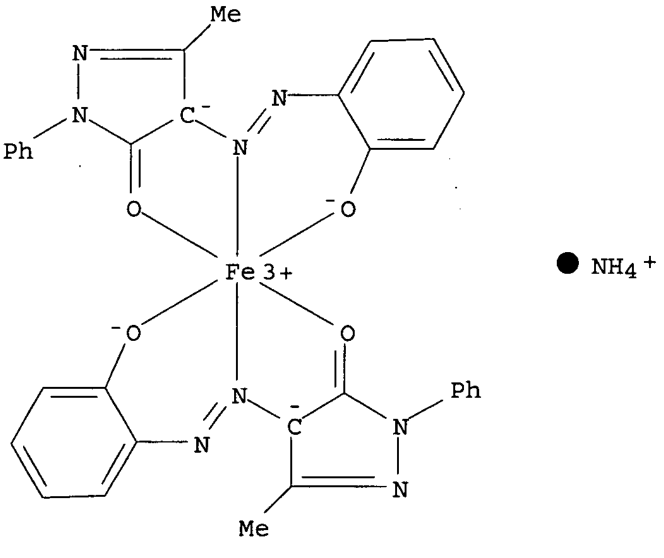
RN 672925-79-0 USPATFULL
CN Ferrate(1-), bis[4-[[4,5-dichloro-2-(hydroxy-κO)phenyl]azo-κN1]-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)-κO3]-, ammonium (9CI) (CA INDEX NAME)



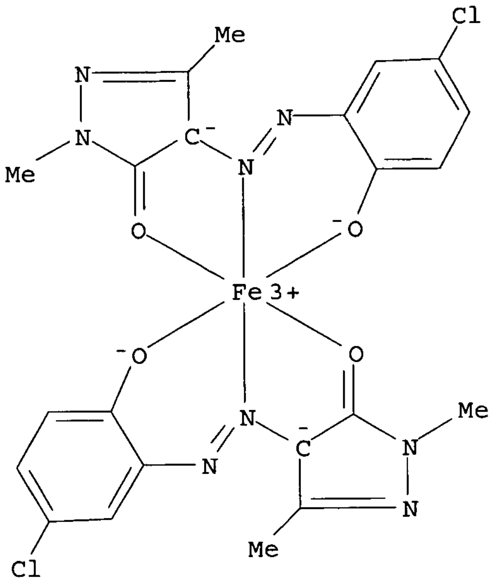
RN 672925-80-3 USPATFULL
CN Ferrate(1-), bis[4-[[3,5-dichloro-2-(hydroxy-κO)phenyl]azo-κN1]-2,4-dihydro-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)-κO3]-, ammonium (9CI) (CA INDEX NAME)



RN 672925-81-4 USPATFULL
CN Ferrate(1-), bis[2,4-dihydro-4-[[2-(hydroxy-κO)phenyl]azo-κN1]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)-κO3]-, ammonium (9CI) (CA INDEX NAME)



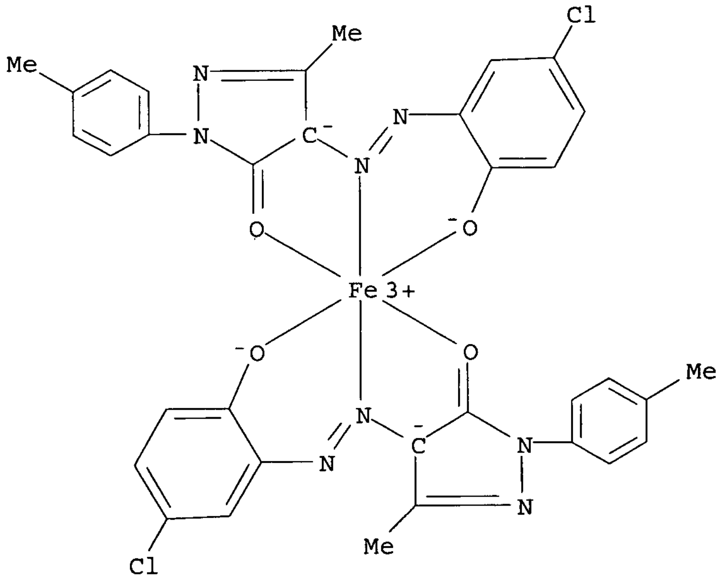
RN 672925-82-5 USPATFULL
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2,4-dihydro-2,5-dimethyl-3H-pyrazol-3-onato(2-)-κO3]-, ammonium (9CI) (CA INDEX NAME)



● NH_4^+

RN 672925-83-6 USPATFULL
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2,4-dihydro-5-methyl-2-(4-methylphenyl)-3H-pyrazol-3-onato(2-)-κO3]-, ammonium (9CI) (CA INDEX NAME)

PAGE 1-A



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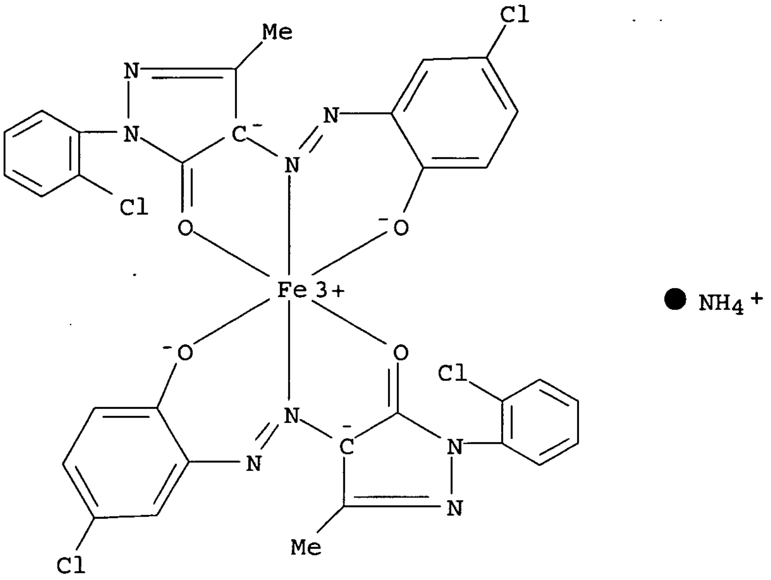
● NH_4^+

RN 672925-84-7 USPATFULL
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-(2-chlorophenyl)-2,4-dihydro-5-methyl-3H-pyrazol-3-onato(2-)-κO3]-, ammonium (9CI) (CA INDEX NAME)



RN 672925-85-8 USPATFULL
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-(4-chlorophenyl)-2,4-dihydro-5-methyl-3H-pyrazol-3-onato(2-)-κO3]-, sodium (9CI) (CA INDEX NAME)

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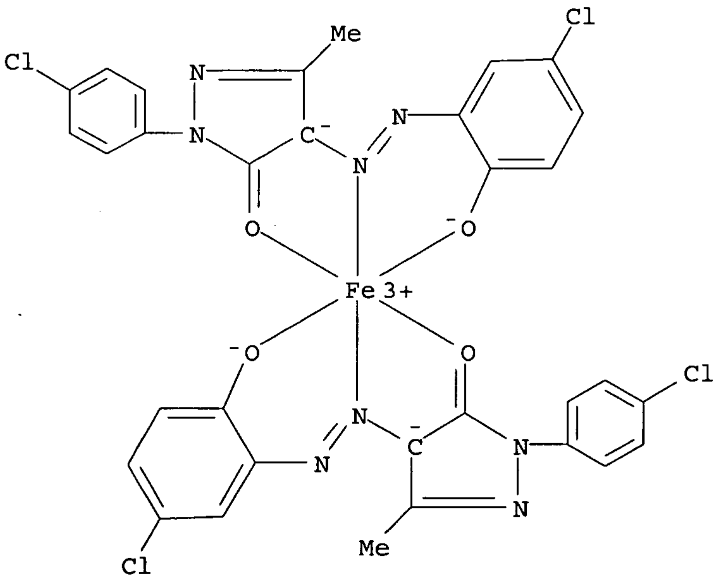

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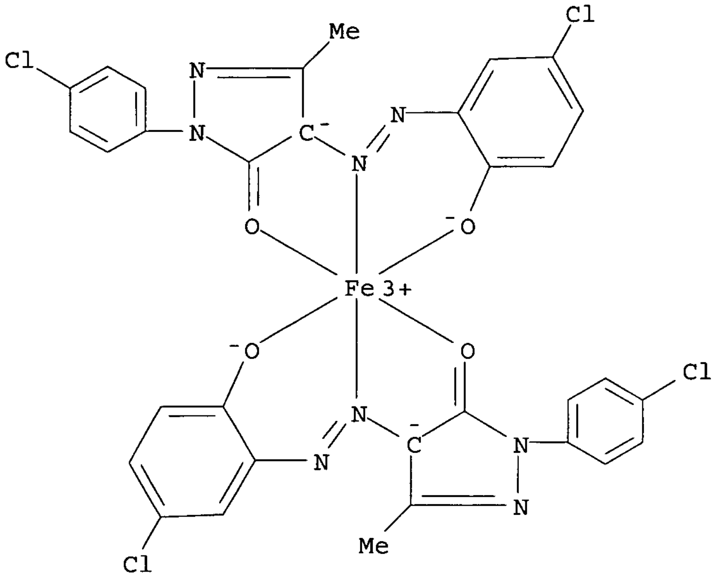
● Na^+

RN 672925-85-8 USPATFULL
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-(4-chlorophenyl)-2,4-dihydro-5-methyl-3H-pyrazol-3-onato(2-)-κO3]-, sodium (9CI) (CA INDEX NAME)

PAGE 1-A



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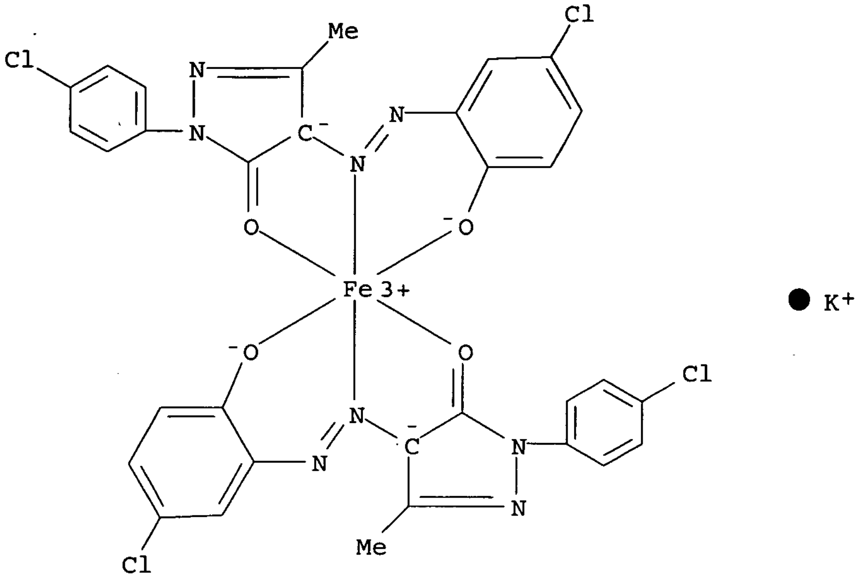
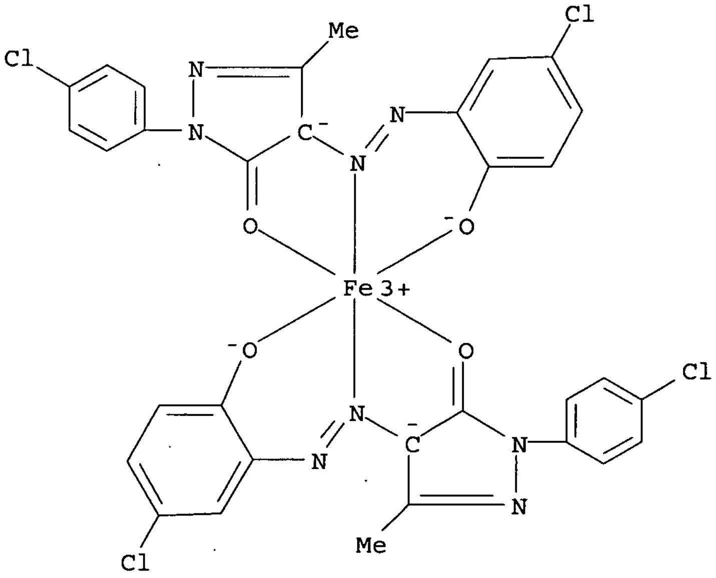
● Na^+

RN 672925-86-9 USPATFULL
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-(4-chlorophenyl)-2,4-dihydro-5-methyl-3H-pyrazol-3-onato(2-)-κO3]-, potassium (9CI) (CA INDEX NAME)



RN 672925-87-0 USPATFULL
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-
(4-chlorophenyl)-2,4-dihydro-5-methyl-3H-pyrazol-3-onato(2-)-κO3]-
, lithium (9CI) (CA INDEX NAME)

PAGE 1-A



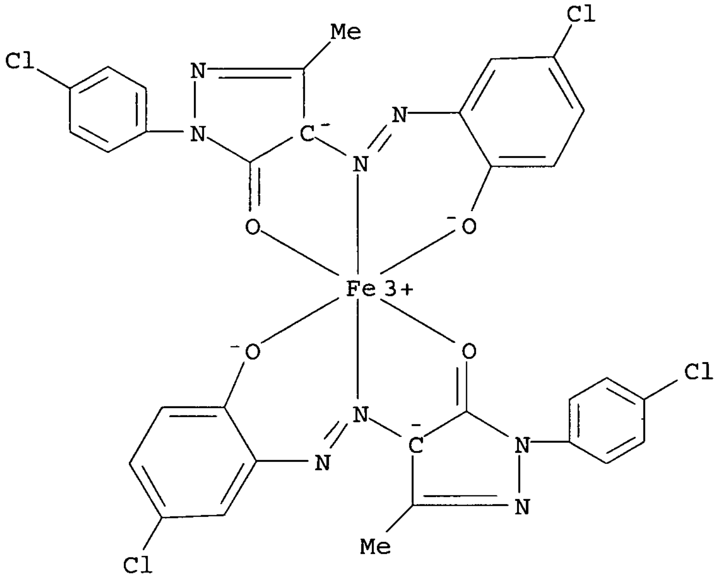
PAGE 2-A

● Li^+

```
RN   672925-89-2  USPATFULL
CN   2-Propanaminium, N,N,N-tris(1,1-dimethylethyl)-2-methyl-,
       bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-(4-
       chlorophenyl)-2,4-dihydro-5-methyl-3H-pyrazol-3-onato(2-)-
       κO3]ferrate(1-)  (9CI)   (CA INDEX NAME)

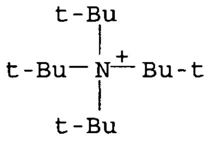
     CM   1

     CRN  672925-88-1
     CMF  C32 H20 Cl4 Fe N8 O4
     CCI  CCS
```



```
     CM   2

     CRN  48069-38-1
     CMF  C16 H36 N
```

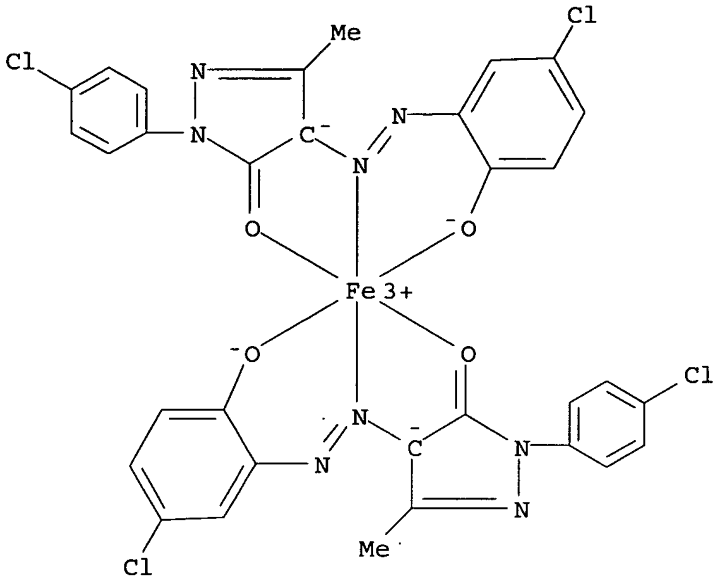


$$\text{t-Bu}-\overset{\overset{\text{t-Bu}}{|}}{\underset{\underset{\text{t-Bu}}{|}}{N^{+}}}-\text{Bu-t}$$

```
RN   672925-90-5  USPATFULL
CN   1-Butanaminium, N,N,N-tributyl-, bis[4-[[5-chloro-2-(hydroxy-
       κO)phenyl]azo-κN1]-2-(4-chlorophenyl)-2,4-dihydro-5-methyl-
       3H-pyrazol-3-onato(2-)-κO3]ferrate(1-)  (9CI)   (CA INDEX NAME)

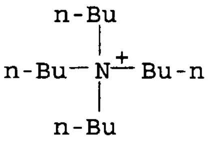
     CM   1

     CRN  672925-88-1
     CMF  C32 H20 Cl4 Fe N8 O4
     CCI  CCS
```



```
     CM   2

     CRN  10549-76-5
     CMF  C16 H36 N
```

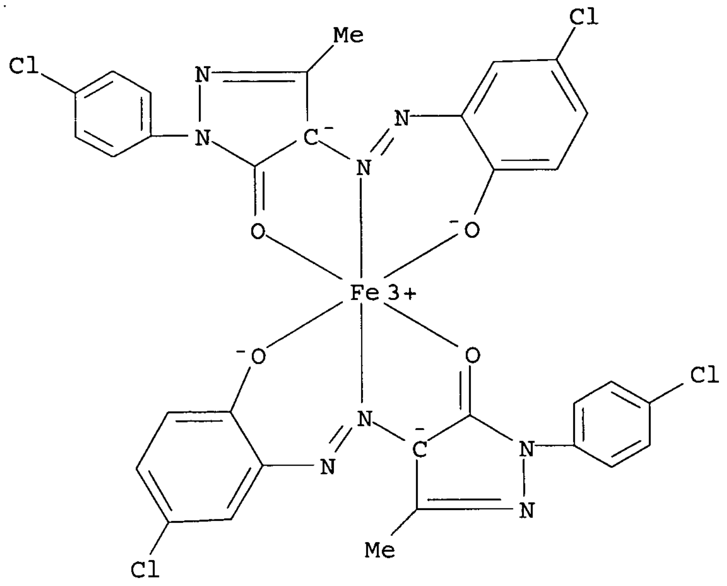


$\text{n-Bu}-\overset{\text{n-Bu}}{\underset{\text{n-Bu}}{N^{+}}}-\text{Bu-n}$

```
RN   672925-91-6  USPATFULL
CN   1-Propanaminium, N,N,N-tripropyl-, bis[4-[[5-chloro-2-(hydroxy-
       κO)phenyl]azo-κN1]-2-(4-chlorophenyl)-2,4-dihydro-5-methyl-
       3H-pyrazol-3-onato(2-)-κO3]ferrate(1-) (9CI)  (CA INDEX NAME)

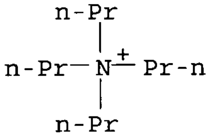
     CM   1

     CRN  672925-88-1
     CMF  C32 H20 Cl4 Fe N8 O4
     CCI  CCS
```



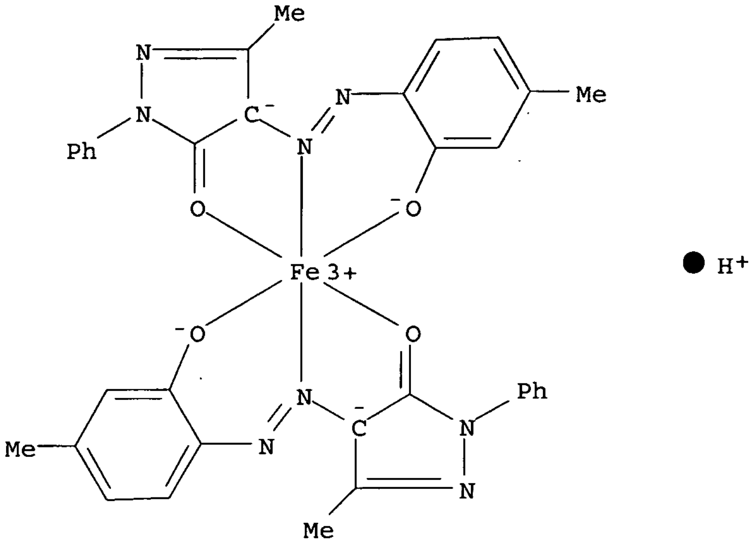
CM 2

CRN 13010-31-6
CMF C12 H28 N



$$\text{n-Pr}-\overset{\text{n-Pr}}{\underset{\text{n-Pr}}{N^{+}}}-\text{Pr-n}$$

RN 672925-92-7 USPATFULL
CN Ferrate(1-), bis[2,4-dihydro-4-[[2-(hydroxy-κO)-4-methylphenyl]azo-κN1]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)-κO3]-, hydrogen (9CI) (CA INDEX NAME)



L84 ANSWER 62 OF 105 USPATFULL on STN
ACCESSION NUMBER: 2004:240192 USPATFULL
TITLE: Monometallic azo complexes of late transition metals for the **polymerization** of olefins
INVENTOR(S): Weiss, Thomas, Mannheim, GERMANY, FEDERAL REPUBLIC OF

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2004186007	A1	20040923	
APPLICATION INFO.:	US 2004-768291	A1	20040130	(10)

	NUMBER	DATE
PRIORITY INFORMATION:	DE 2003-10304158	20030203

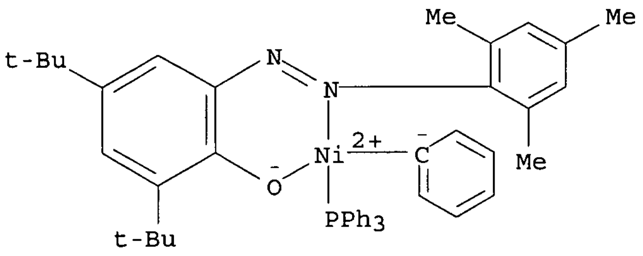
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: BAYER MATERIAL SCIENCE LLC, 100 BAYER ROAD, PITTSBURGH, PA, 15205
NUMBER OF CLAIMS: 17
EXEMPLARY CLAIM: 1
LINE COUNT: 1541
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to compounds of transition metals with azo ligands, a process for their production, the use of these compounds as **catalysts**, a process for olefin (co)**polymerization** using these compounds, reaction products of these compounds with co-**catalysts**, the olefin (co)**polymer**, the use of these olefin (co)**polymers** for the production of molded parts, as well as molded parts that are produced from the olefin (co) **polymers**.

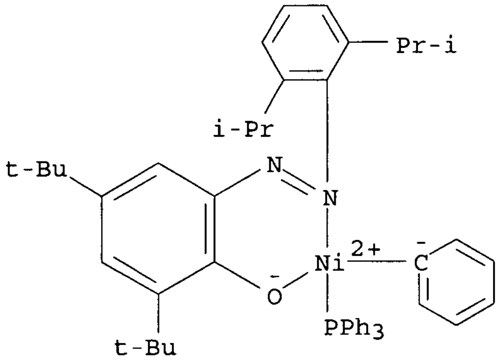
IT **732285-98-2P 732285-99-3P 732286-00-9P**
732286-01-0P 732286-02-1P 732286-03-2P
732286-04-3P
(preparation of monometallic azo complexes of late transition metals for the polymerization of olefins)

RN 732285-98-2 USPATFULL
CN Nickel, [2,4-bis(1,1-dimethylethyl)-6-[(2,4,6-trimethylphenyl)azo-

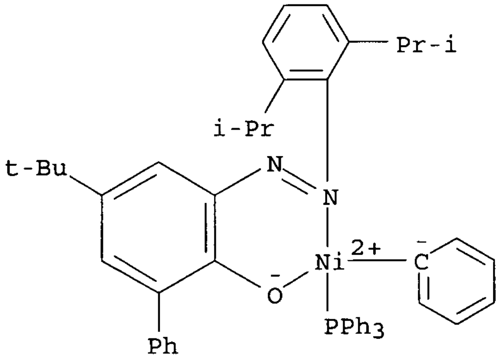
κN2]phenolato-κO]phenyl(triphenylphosphine)- (9CI) (CA INDEX NAME)



RN 732285-99-3 USPATFULL
CN Nickel, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-4,6-bis(1,1-dimethylethyl)phenolato-κO]phenyl(triphenylphosphine)- (9CI) (CA INDEX NAME)

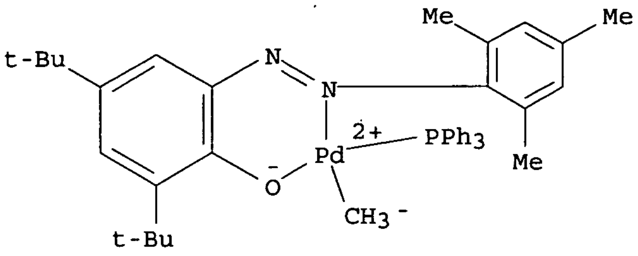


RN 732286-00-9 USPATFULL
CN Nickel, [3-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-5-(1,1-dimethylethyl)[1,1'-biphenyl]-2-olato-κO]phenyl(triphenylphosphine)- (9CI) (CA INDEX NAME)

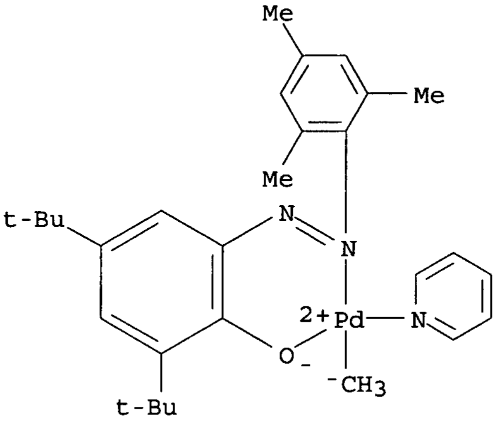


RN 732286-01-0 USPATFULL
CN Palladium, [2,4-bis(1,1-dimethylethyl)-6-[(2,4,6-trimethylphenyl)azo-κN2]phenolato-κO]methyl(triphenylphosphine)- (9CI) (CA

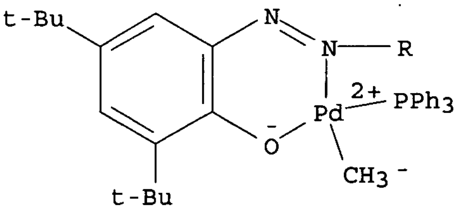
INDEX NAME)

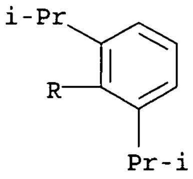


RN 732286-02-1 USPATFULL
CN Palladium, [2,4-bis(1,1-dimethylethyl)-6-[(2,4,6-trimethylphenyl)azo-κN2]phenolato-κO]methyl(pyridine)- (9CI) (CA INDEX NAME)

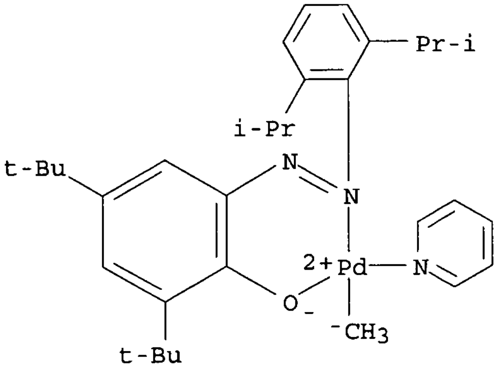


RN 732286-03-2 USPATFULL
CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-4,6-bis(1,1-dimethylethyl)phenolato-κO]methyl(triphenylphosphine)- (9CI) (CA INDEX NAME)





RN 732286-04-3 USPATFULL
CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-4,6-bis(1,1-dimethylethyl)phenolato-κO]methyl(pyridine)- (9CI) (CA INDEX NAME)



L84 ANSWER 63 OF 105 USPATFULL on STN

ACCESSION NUMBER: 2003:37423 USPATFULL
TITLE: Electrophotographic toner and development process with improved charge to mass stability
INVENTOR(S): Fields, Robert D., Rochester, NY, UNITED STATES
Lambert, Patrick M., Rochester, NY, UNITED STATES
Tyagi, Dinesh, Fairport, NY, UNITED STATES
Anderson, James H., Rochester, NY, UNITED STATES

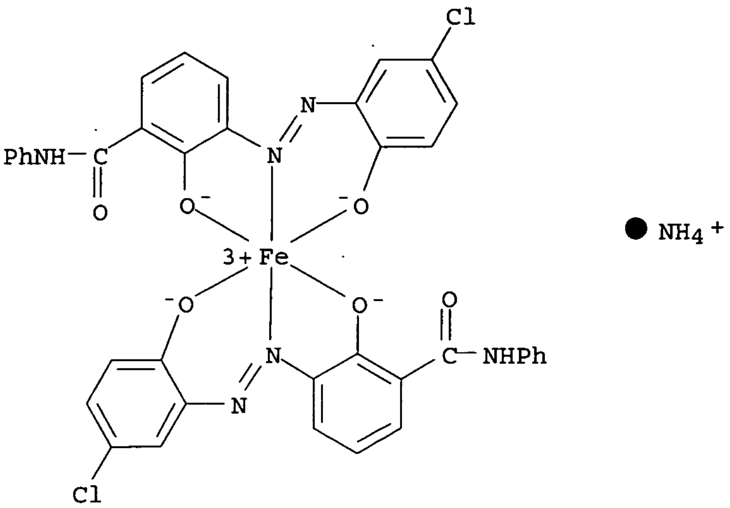
	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2003027068	A1	20030206	
APPLICATION INFO.:	US 2001-880689	A1	20010613	(9)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Luke A. Kilyk, KILYK & BOWERSOX, P.L.L.C., 53A Lee Street, Warrenton, VA, 20186
NUMBER OF CLAIMS: 39
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 8 Drawing Page(s)
LINE COUNT: 988
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Toners and developers are disclosed. The toner of the present invention contains at least one toner resin, at least one charge control agent, at least one surface treatment agent, and optionally at least one release agent and/or colorant. The toners of the present invention have excellent triboelectric stability over a wide range of temperatures and relative humidity environmental conditions. Further, the toners of the present invention have excellent charge to mass stability over long periods of time. Development systems and methods for developing electrostatic images with toner are further disclosed.

IT **156108-08-6**, T 77
(T 77; electrophotog. toner and development process with improved charge to mass stability)

RN 156108-08-6 USPATFULL
CN Ferrate(1-), bis[3-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-(hydroxy-κO)-N-phenylbenzamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)



L84 ANSWER 64 OF 105 USPATFULL on STN
ACCESSION NUMBER: 2002:105849 USPATFULL
TITLE: Toner
INVENTOR(S): Kasuya, Takashige, Shizuoka-ken, JAPAN
Tanikawa, Hirohide, Shizuoka-ken, JAPAN
Yusa, Hiroshi, Tokyo, JAPAN
Ogawa, Yoshihiro, Shizuoka-ken, JAPAN
Yamazaki, Katsuhisa, Numazu-shi, JAPAN
Kashiwabara, Ryota, Numazu-shi, JAPAN

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 2002055053	A1	20020509	
APPLICATION INFO.:	US 2001-946498	A1	20010906	(9)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2000-269632	20000906

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: FITZPATRICK CELLA HARPER & SCINTO, 30 ROCKEFELLER PLAZA, NEW YORK, NY, 10112
NUMBER OF CLAIMS: 18
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 8 Drawing Page(s)
LINE COUNT: 1784
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

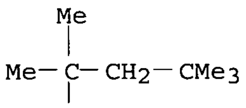
AB A toner showing quick chargeability and stable chargeability in a high humidity environment is provided by a combination of a specific polyester binder resin and a specific azo iron compound. The polyester binder resin has an acid value (Av) of 0.5 to 30 mgKOH/g and a hydroxyl value (OHv) of 1 to 50 mgKOH/g giving a ratio (Av/OHv) therebetween satisfying: $0.05 \leq Av/OHv \leq 2.0$. The azo iron compound is preferably an iron complex (salt) including as a ligand a mono-azo compound formed by diazo coupling between a 2-aminophenol (derivative) and an alkyl-substituted naphthol (derivative).

IT **268728-80-9P 337369-22-9P 337369-26-3P**

337369-30-9P 403790-98-7P 403790-99-8P
403791-00-4P
(azo iron compound; electrophotog. toner exhibiting quick and stable chargeability in high humidity environment)

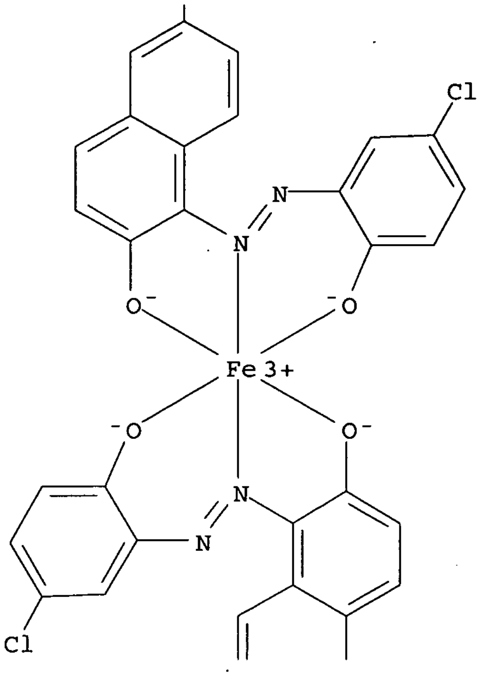
RN 268728-80-9 USPATFULL
CN Ferrate(1-), bis[1-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-6-(1,1,3,3-tetramethylbutyl)-2-naphthalenolato(2-)-κO]-, sodium (9CI) (CA INDEX NAME)

PAGE 1-A

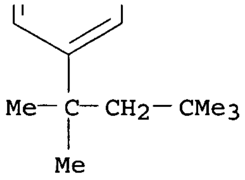


$$\mathrm{Me-\overset{\overset{\displaystyle Me}{|}}{\underset{|}{C}}-CH_2-CMe_3}$$

PAGE 2-A



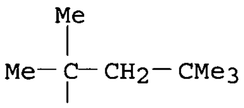
PAGE 3-A



● Na^+

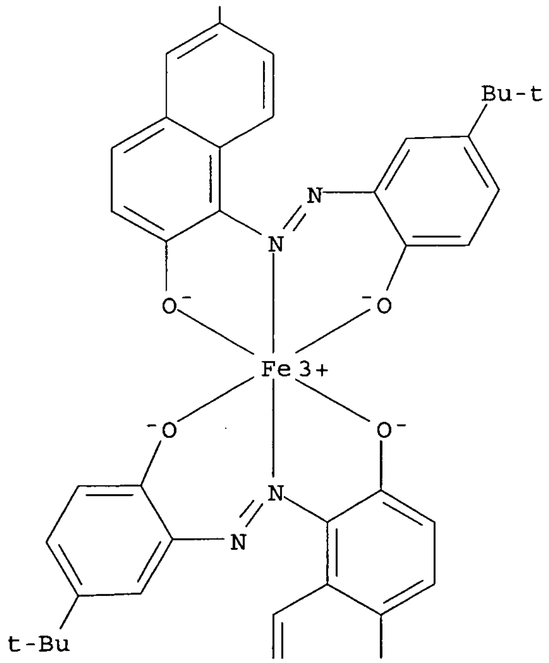
RN 337369-22-9 USPATFULL
CN Ferrate(1-), bis[1-[[5-(1,1-dimethylethyl)-2-(hydroxy-κO)phenyl]azo-κN1]-6-(1,1,3,3-tetramethylbutyl)-2-naphthalenolato(2-)-κO]-, sodium (9CI) (CA INDEX NAME)

PAGE 1-A

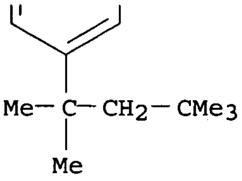


$$\mathrm{Me-\overset{\overset{\textstyle Me}{|}}{\underset{|}{C}}-CH_2-CMe_3}$$

PAGE 2-A



PAGE 3-A

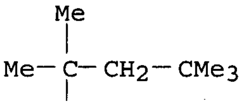


● Na^+

RN 337369-26-3 USPATFULL

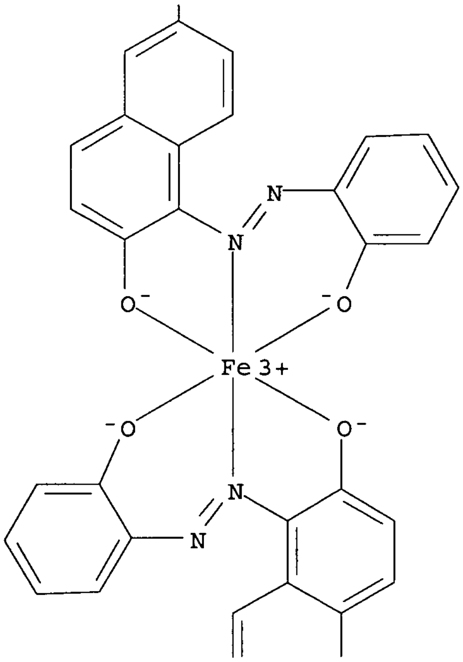
CN Ferrate(1-), bis[1-[[2-(hydroxy-κO)phenyl]azo-κN1]-6-(1,1,3,3-tetramethylbutyl)-2-naphthalenolato(2-)-κO]-, sodium (9CI) (CA INDEX NAME)

PAGE 1-A

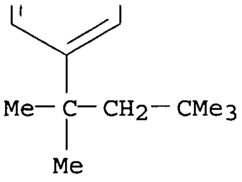


$$\mathrm{Me-\overset{Me}{\underset{|}{\overset{|}{C}}}-CH_2-CMe_3}$$

PAGE 2-A



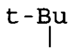
PAGE 3-A



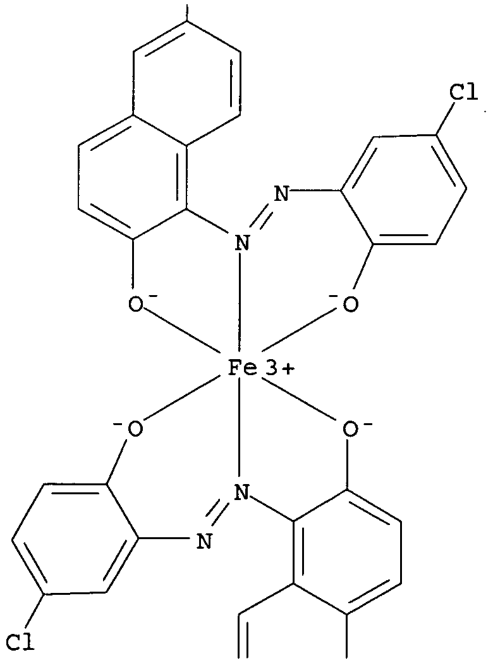
● Na^+

RN 337369-30-9 USPATFULL
CN Ferrate(1-), bis[1-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-6-(1,1-dimethylethyl)-2-naphthalenolato(2-)-κO]-, sodium (9CI) (CA INDEX NAME)

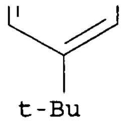
PAGE 1-A



PAGE 2-A



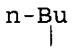
PAGE 3-A



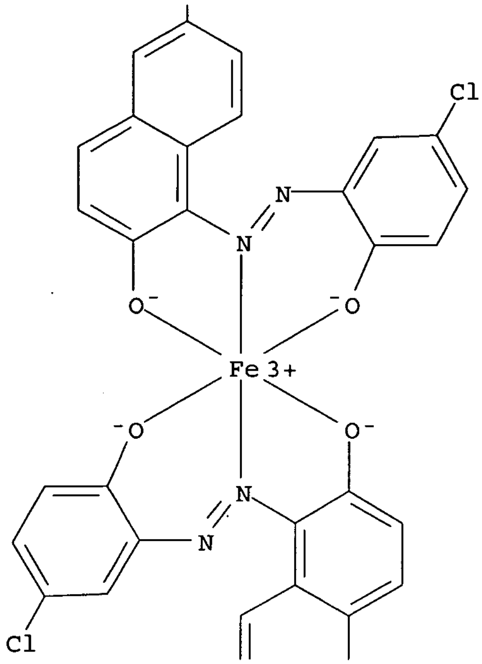
● Na+

RN 403790-98-7 USPATFULL
CN Ferrate(1-), bis[6-butyl-1-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-naphthalenolato(2-)-κO]-, sodium (9CI) (CA INDEX NAME)

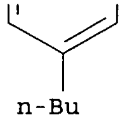
PAGE 1-A



PAGE 2-A



PAGE 3-A

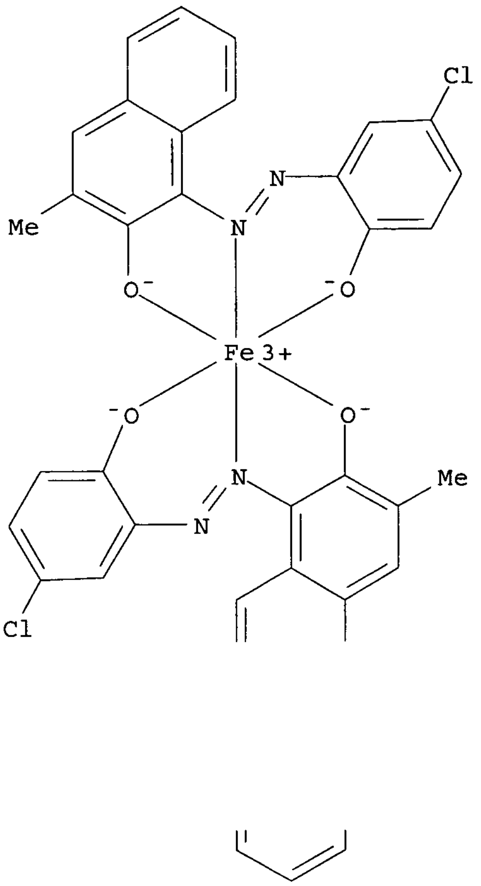


● Na^+

RN 403790-99-8 USPATFULL
CN Ferrate(1-), bis[1-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-methyl-2-naphthalenolato(2-)-κO]-, sodium (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A

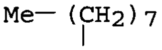


● Na+

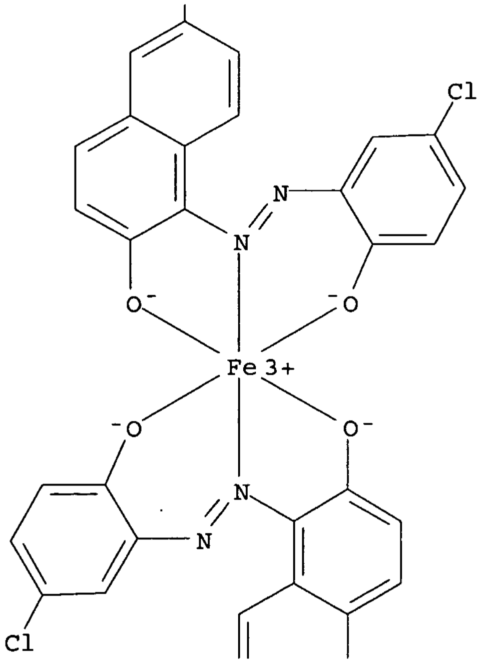
RN 403791-00-4 USPATFULL

CN Ferrate(1-), bis[1-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-6-octyl-2-naphthalenolato(2-)-κO]-, sodium (9CI) (CA INDEX NAME)

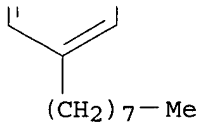
PAGE 1-A



PAGE 2-A



PAGE 3-A



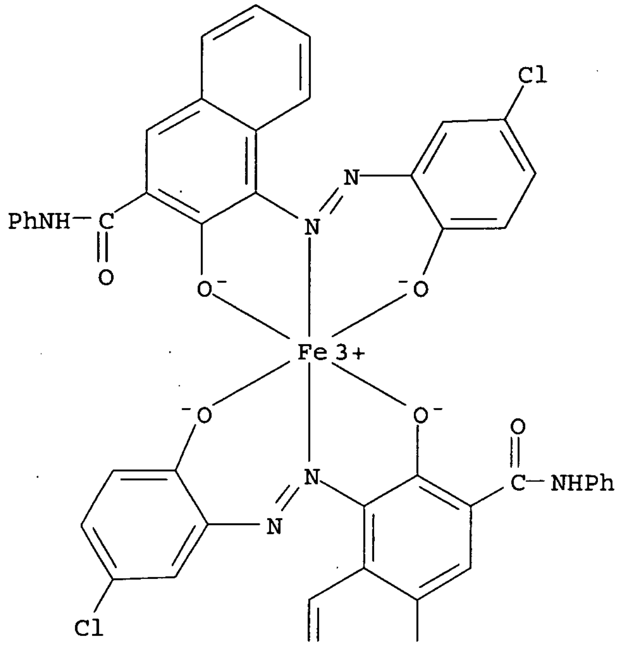
● Na^+

```
L84  ANSWER 65 OF 105  USPATFULL on STN
ACCESSION NUMBER:      2002:99026  USPATFULL
TITLE:                 Dry toner, image forming method and prodcess cartridge
INVENTOR(S):           Yamazaki, Katsuhisa, Numazu-shi, JAPAN
                       Onuma, Tsutomu, Yokohama-shi, JAPAN
                       Okubo, Nobuyuki, Yokohama-shi, JAPAN
                       Nakanishi, Tsuneo, Abiko-shi, JAPAN
                       Hiratsuka, Kaori, Shizuoka-ken, JAPAN

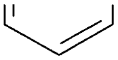
                            NUMBER        KIND    DATE
                       --------------- ------ --------
PATENT INFORMATION:    US 2002051922      A1   20020502
                       US 6589701         B2   20030708
APPLICATION INFO.:     US 2001-911723     A1   20010725   (9)

                              NUMBER         DATE
                       ------------------ --------
PRIORITY INFORMATION:  JP 2000-228078     20000728
DOCUMENT TYPE:         Utility
FILE SEGMENT:          APPLICATION
LEGAL REPRESENTATIVE:  FITZPATRICK CELLA HARPER & SCINTO, 30 ROCKEFELLER
                       PLAZA, NEW YORK, NY, 10112
NUMBER OF CLAIMS:      52
EXEMPLARY CLAIM:       1
NUMBER OF DRAWINGS:    25 Drawing Page(s)
LINE COUNT:            3607
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB       A dry magnetic toner is formed of magnetic toner particles comprising a
       binder resin and magnetic iron oxide particles. The magnetic toner is
       provided with excellent developing performances and transferability by
       controlling the presence of isolated iron-containing particles and
       containing a high percentage of spherical particles, the amount of which
       is controlled relative to the weight-average particle size of the
       magnetic toner and a content of particles of 3 µm or below in the
       magnetic toner.
IT    104815-18-1 394653-25-9
        (charge-control agent; magnetic dry toner comprising iron oxide
        particles and binder resin and wax and organometallic complex as
        charge-control agent)
RN    104815-18-1  USPATFULL
CN    Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-
      (hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium
      (9CI)  (CA INDEX NAME)
```

PAGE 1-A



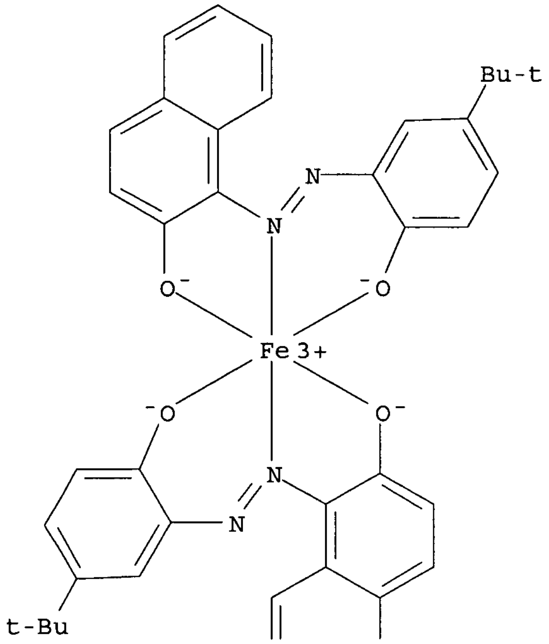
PAGE 2-A



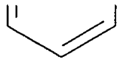
● NH_4^+

RN 394653-25-9 USPATFULL
CN Ferrate(1-), bis[1-[[5-(1,1-dimethylethyl)-2-(hydroxy-κO)phenyl]azo-κN1]-2-naphthalenolato(2-)-κO]-, hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



● H+

L84 ANSWER 66 OF 105 USPATFULL on STN

ACCESSION NUMBER: 2002:310741 USPATFULL

TITLE: Toner and resin composition for the toner

INVENTOR(S):
Karaki, Yuki, Shizuoka-ken, JAPAN
Yusa, Hiroshi, Machida, JAPAN
Kasuya, Takashige, Shizuoka-ken, JAPAN
Ogawa, Yoshihiro, Shizuoka-ken, JAPAN

PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Tokyo, JAPAN (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6485875	B1	20021126	
APPLICATION INFO.:	US 2000-696296		20001026	(9)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1999-303335	19991026

JP 2000-8460 20000118
DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Rodee, Christopher
LEGAL REPRESENTATIVE: Fitzpatrick, Cella, Harper & Scinto
NUMBER OF CLAIMS: 42
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)
LINE COUNT: 2222
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

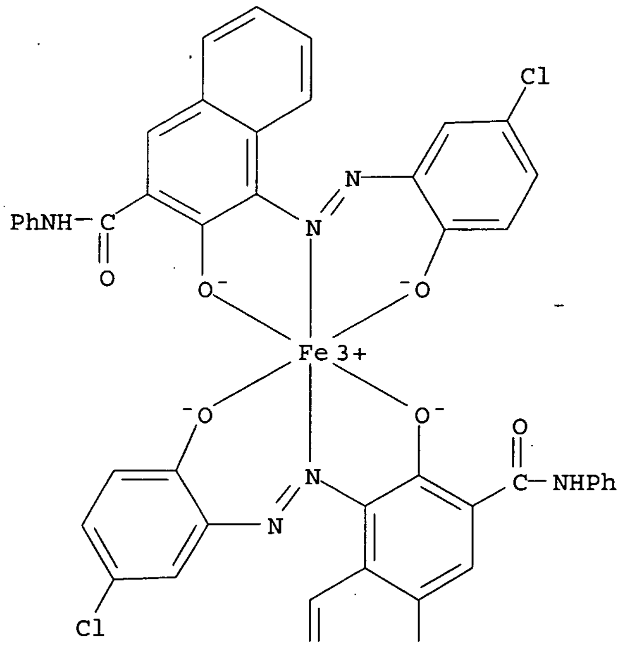
AB A toner is constituted by at least a binder resin, a colorant and a wax. The binder resin has been formed from monomers including a vinyl monomer and polyester-forming monomers containing at least a polybasic carboxylic acid having three or more carboxyl groups or its anhydride, and comprises at least a hybrid resin comprising a vinyl **polymer** unit and a polyester unit.

IT **104815-18-1**
(electrophotog. toner comprising hybrid binder resin prepared from vinyl and polyester-forming monomers to achieve uniform dispersibility of wax in binder)

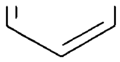
RN 104815-18-1 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



● NH_4^+

L84 ANSWER 67 OF 105 USPATFULL on STN
ACCESSION NUMBER: 2002:201643 USPATFULL
TITLE: Limiting the presence of microorganisms using **polymer**-bound metal-containing compositions
INVENTOR(S): Landgrebe, Kevin D., Woodbury, MN, United States
Hastings, David J., London, CANADA
Smith, Terrance P., Woodbury, MN, United States
Cuny, Gregory D., Hudson, MA, United States
Sengupta, Ashok, London, CANADA
Mudalige, Chandrika D., London, CANADA
Brandys, Frank A., London, CANADA
PATENT ASSIGNEE(S): 3M Innovative Properties Company, St. Paul, MN, United States (U.S. corporation)

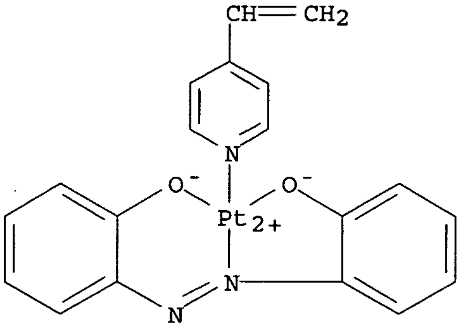
	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6432396	B1	20020813	
APPLICATION INFO.:	US 2000-611346		20000706	(9)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Page, Thurman K.
ASSISTANT EXAMINER: Fubara, Blessing
LEGAL REPRESENTATIVE: Busse, Paul W., Gram, Christopher D., Sprague, Robert W.
NUMBER OF CLAIMS: 29
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT: 1193
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides a method of limiting the presence of a microorganism by contacting the microorganism with **polymer**-bound metal-containing compositions. The compositions include metal-containing compounds that may be prepared by reacting or **polymerizing** metal-containing monomers. The microorganism may be present in a liquid that is contacted with the **polymer**-bound metal-containing composition. Alternatively, the microorganism may be present in a solid that is contacted with the **polymer**-bound metal-containing composition.

IT **147361-10-2P 222989-09-5P**
(limiting presence of microorganisms using **polymer**-bound metal-containing compns.)

RN 147361-10-2 USPATFULL
CN Platinum, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](4-ethenylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)



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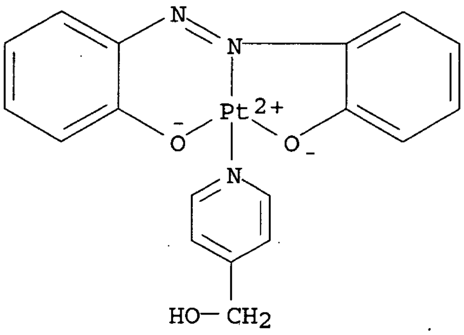
RN   222989-09-5  USPATFULL
CN   Platinum, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](4-
       pyridinemethanol-κN1)-, (SP-4-2)- (9CI)  (CA INDEX NAME)
```



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L84  ANSWER 68 OF 105  USPATFULL on STN
ACCESSION NUMBER:         2002:69739  USPATFULL
TITLE:                    Toner for developing electrostatic image, image forming
                          method and process cartridge
INVENTOR(S):              Tomiyama, Koichi, Numazu, JAPAN
                          Kohtaki, Takaaki, Mishima, JAPAN
                          Ohno, Manabu, Numazu, JAPAN
                          Unno, Makoto, Tokyo, JAPAN
                          Mikuriya, Yushi, Numazu, JAPAN
                          Okubo, Nobuyuki, Yokohama, JAPAN
                          Doujo, Tadashi, Numazu, JAPAN
                          Suzuki, Shunji, Tokyo, JAPAN
PATENT ASSIGNEE(S):       Canon Kabushiki Kaisha, Tokyo, JAPAN (non-U.S.
                          corporation)

                               NUMBER        KIND    DATE
                          ---------------- ------ --------
PATENT INFORMATION:       US 6365314         B1    20020402
APPLICATION INFO.:        US 1999-457138           19991209 (9)
RELATED APPLN. INFO.:     Division of Ser. No. US 1997-862353, filed on 23 May
                          1997, now patented, Pat. No. US 6090515
                          Continuation-in-part of Ser. No. US 1995-436823, filed
                          on 8 May 1995, now abandoned

                                  NUMBER        DATE
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PRIORITY INFORMATION:	JP 1994-123303 19940513
DOCUMENT TYPE:	Utility
FILE SEGMENT:	GRANTED
PRIMARY EXAMINER:	Rodee, Christopher
LEGAL REPRESENTATIVE:	Fitzpatrick, Cella, Harper & Scinto
NUMBER OF CLAIMS:	35
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	5 Drawing Figure(s); 4 Drawing Page(s)
LINE COUNT:	1937

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A toner for developing electrostatic images. having a uniform composition and uniform performances over varying sizes of toner particles is constituted by (a) a binder resin, (b) a long-chain alkyl compound and (c) a specific azo-type iron complex. The long-chain alkyl compound is represented by the following formula (1), (2) or (3):

CH.sub.3.paren open-st.CH.sub.2.paren close-st..sub.xCH.sub.2OH (1),

##STR1## CH.sub.3.paren open-st.CH.sub.2.paren close-st..sub.yCH.sub.2COOH (3),

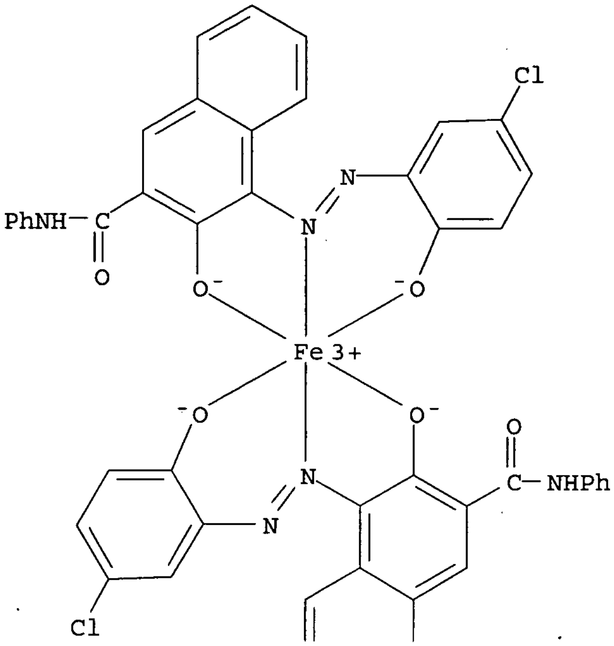
wherein x and y independently denote an average value in the range of 35-150.

IT **104815-18-1 106616-48-2 119029-85-5**
125304-21-4 131494-75-2 163669-67-8
163756-19-2 163756-22-7 174304-81-5
174304-82-6 174304-83-7 174304-84-8
174304-85-9 174304-86-0 174304-87-1
174304-88-2
(contained in electrostatog. toner for image formation)

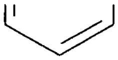
RN 104815-18-1 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

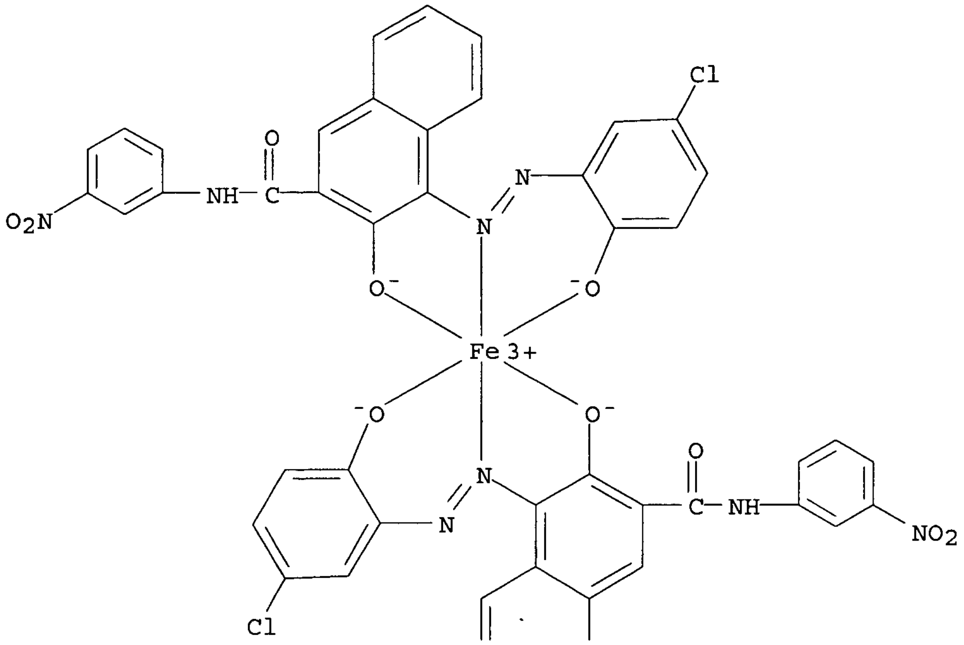


● NH_4^+

RN 106616-48-2 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-(3-nitrophenyl)-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

PAGE 1-A



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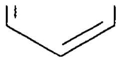
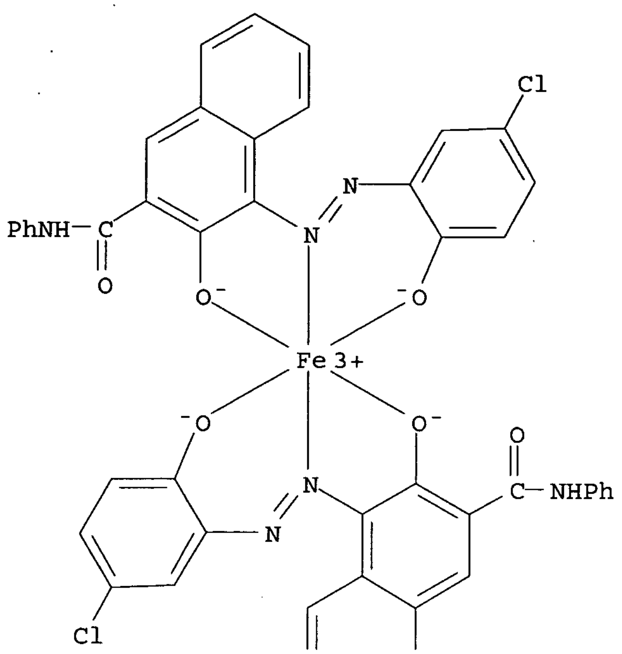


● NH_4^+

RN 119029-85-5 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



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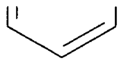
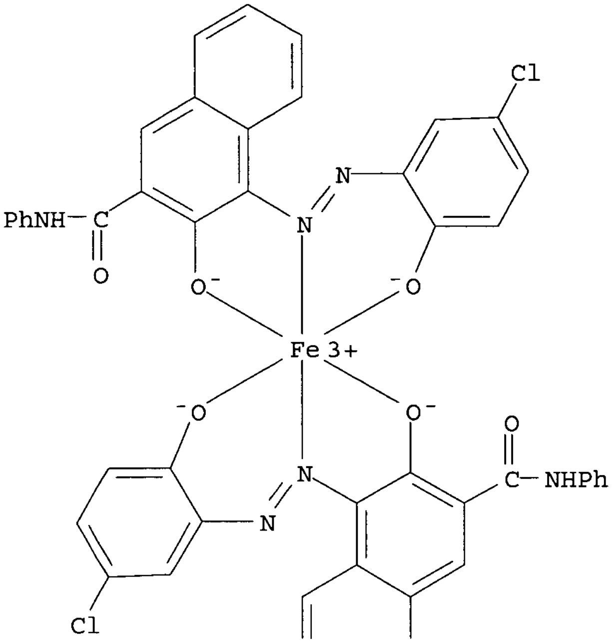


● H^+

RN 125304-21-4 USPATFULL
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, sodium (9CI) (CA INDEX NAME)

PAGE 1-A



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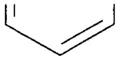
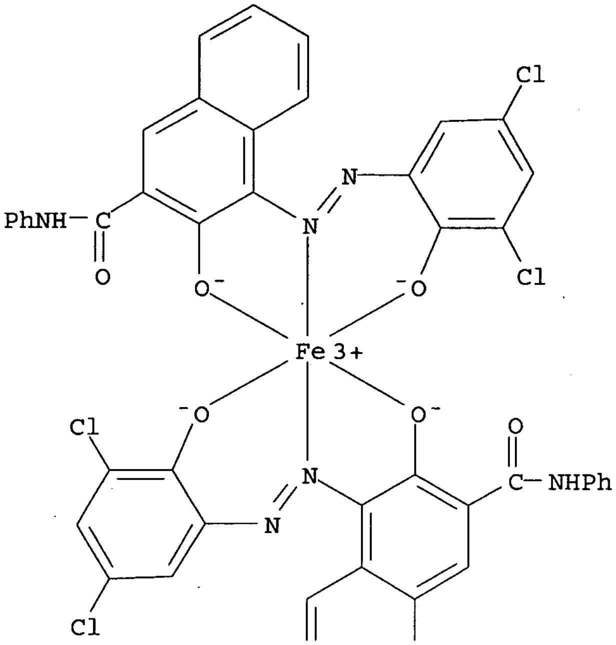


● Na^+

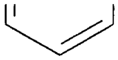
RN 131494-75-2 USPATFULL

CN Ferrate(1-), bis[4-[[3,5-dichloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, sodium (9CI) (CA INDEX NAME)

PAGE 1-A



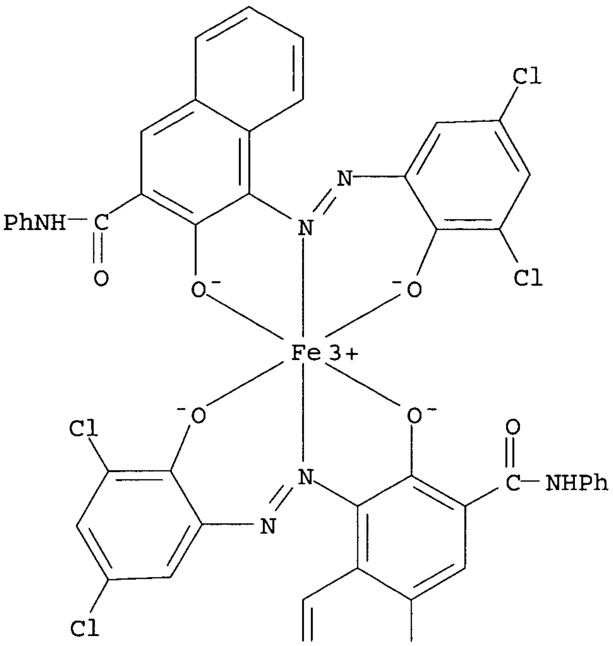
PAGE 2-A



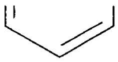
● Na+

RN 163669-67-8 USPATFULL
CN Ferrate(1-), bis[4-[[3,5-dichloro-2-(hydroxy-κO)phenyl]azo-
κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-
, ammonium (9CI) (CA INDEX NAME)

PAGE 1-A



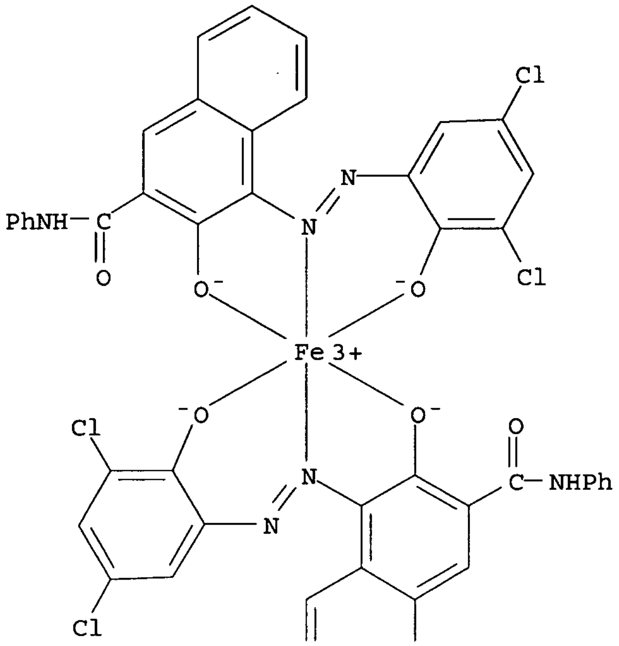
PAGE 2-A



● NH_4^+

RN 163756-19-2 USPATFULL
CN Ferrate(1-), bis[4-[[3,5-dichloro-2-(hydroxy-κO)phenyl]azo-
κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-
, hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



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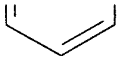
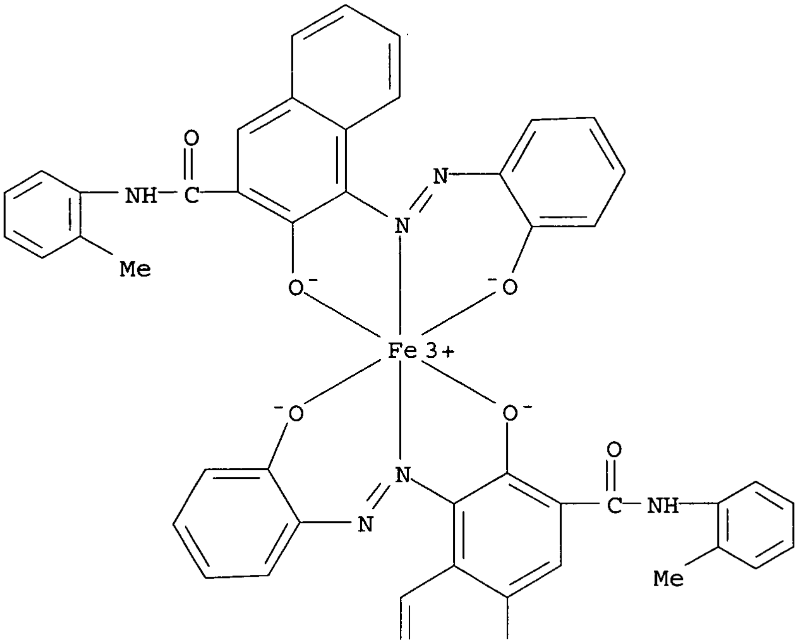


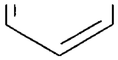
● H^+

RN 163756-22-7 USPATFULL
CN Ferrate(1-), bis[3-(hydroxy-κO)-4-[[2-(hydroxy-κO)phenyl]azo-κN1]-N-(2-methylphenyl)-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



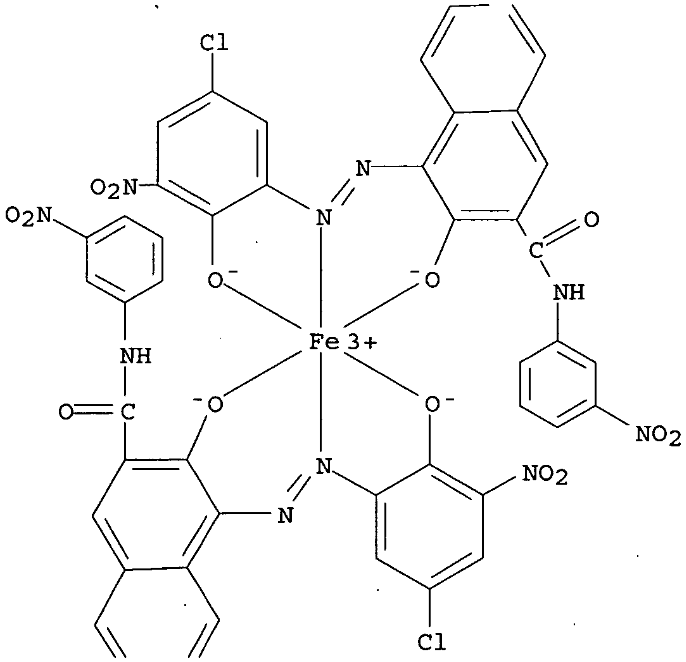
● NH_4^+

RN 174304-81-5 USPATFULL

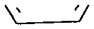
CN Ferrate(1-), bis[4-[(5-chloro-2-hydroxy-3-nitrophenyl)azo]-3-hydroxy-N-(3-nitrophenyl)-2-naphthalenecarboxamidato(2-)]-, sodium (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A



PAGE 3-A



● Na^+

RN 174304-82-6 USPATFULL
CN Ferrate(1-), bis[4-[(5-chloro-2-hydroxyphenyl)azo]-3-hydroxy-N-(3-nitrophenyl)-2-naphthalenecarboxamidato(2-)]-, hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A

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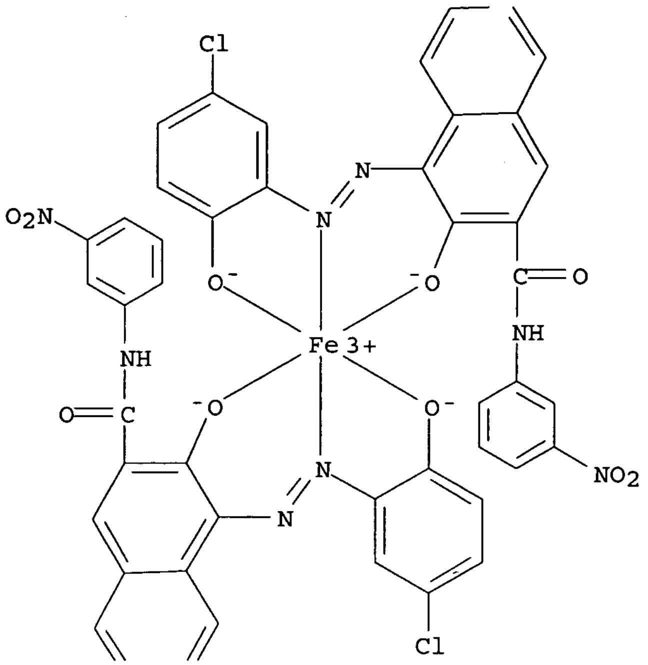
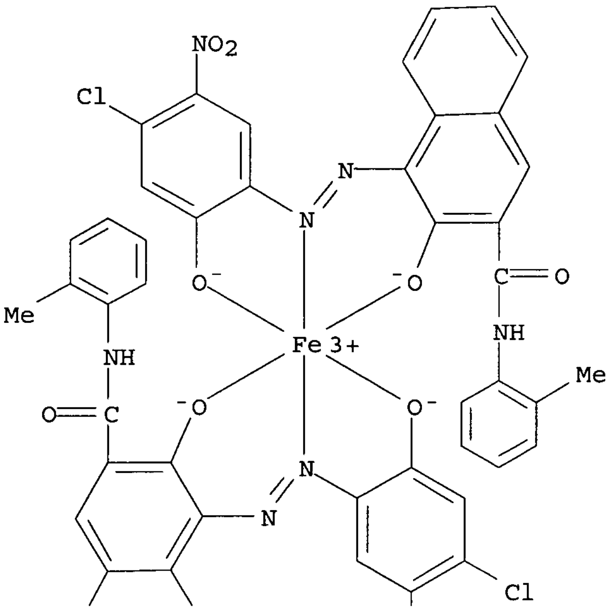


PAGE 3-A

● H^+

RN 174304-83-7 USPATFULL
CN Ferrate(1-), bis[4-[(4-chloro-2-hydroxy-5-nitrophenyl)azo]-3-hydroxy-N-(2-methylphenyl)-2-naphthalenecarboxamidato(2-)]-, sodium (9CI) (CA INDEX NAME)

PAGE 1-A



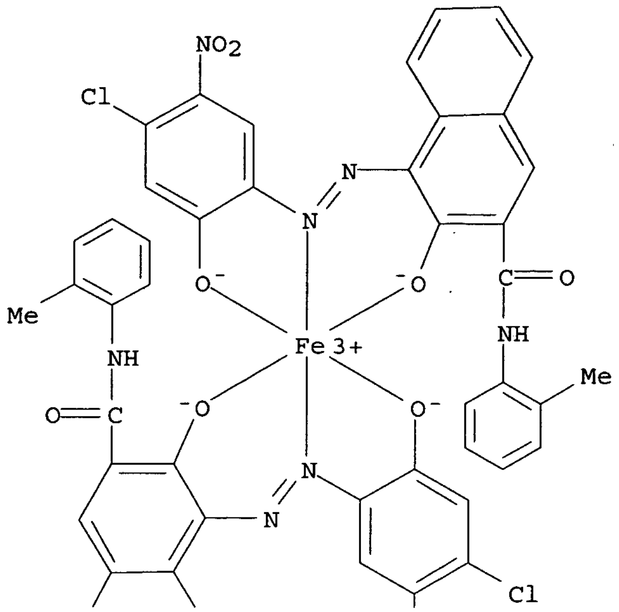
PAGE 2-A

● Na^+

RN 174304-84-8 USPATFULL

CN Ferrate(1-), bis[4-[(4-chloro-2-hydroxy-5-nitrophenyl)azo]-3-hydroxy-N-(2-methylphenyl)-2-naphthalenecarboxamidato(2-)]-, hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

● H$^+$

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RN   174304-85-9  USPATFULL
CN   Ferrate(1-), bis[3-hydroxy-4-[(2-hydroxyphenyl)azo]-N-(2-methylphenyl)-2-
       naphthalenecarboxamidato(2-)]-, sodium (9CI)  (CA INDEX NAME)
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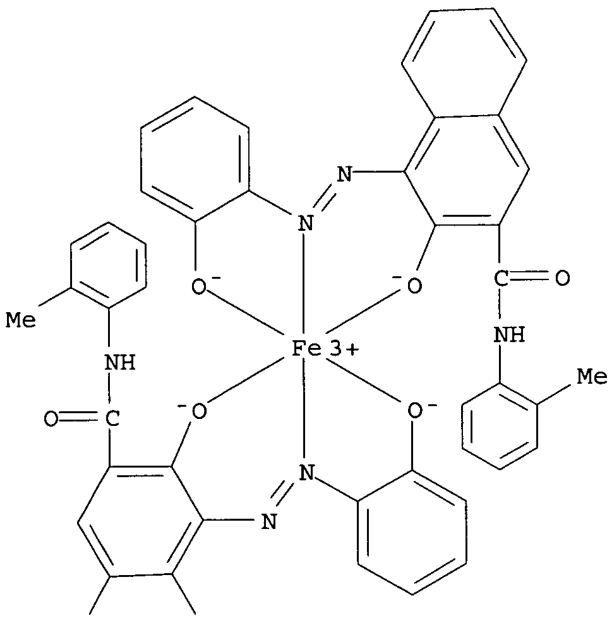

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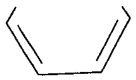

● Na^+

RN 174304-86-0 USPATFULL

CN Ferrate(1-), bis[4-[(5-chloro-2-hydroxy-3-nitrophenyl)azo]-3-hydroxy-N-(3-nitrophenyl)-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

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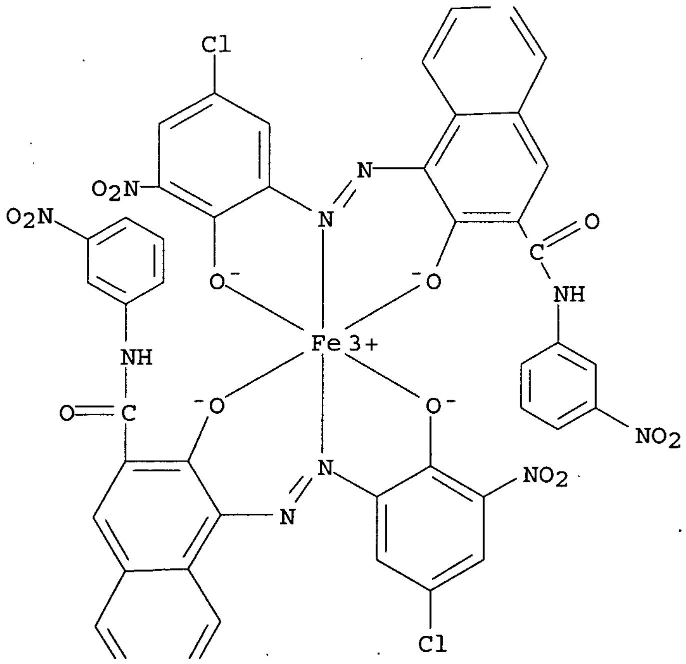
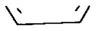


PAGE 3-A



● NH_4^+

RN 174304-87-1 USPATFULL

CN Ferrate(1-), bis[4-[(5-chloro-2-hydroxyphenyl)azo]-3-hydroxy-N-(3-nitrophenyl)-2-naphthalenecarboxamidato(2-)]-, potassium (9CI) (CA INDEX NAME)

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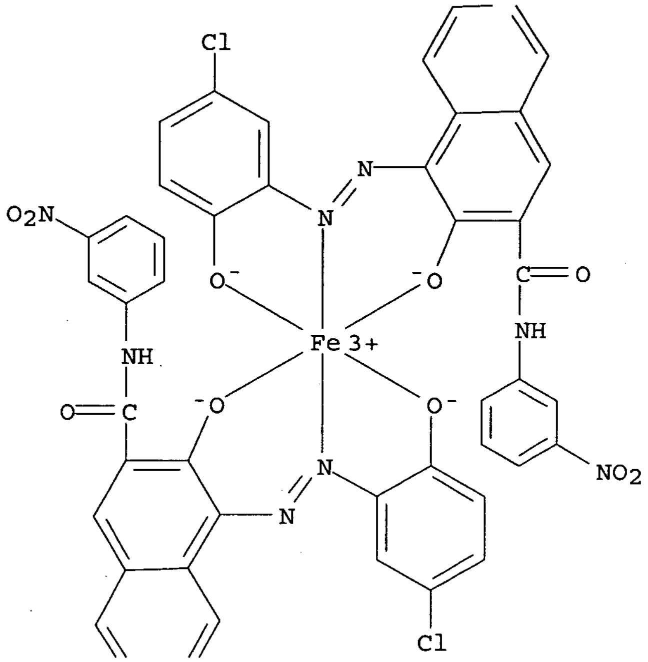
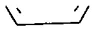


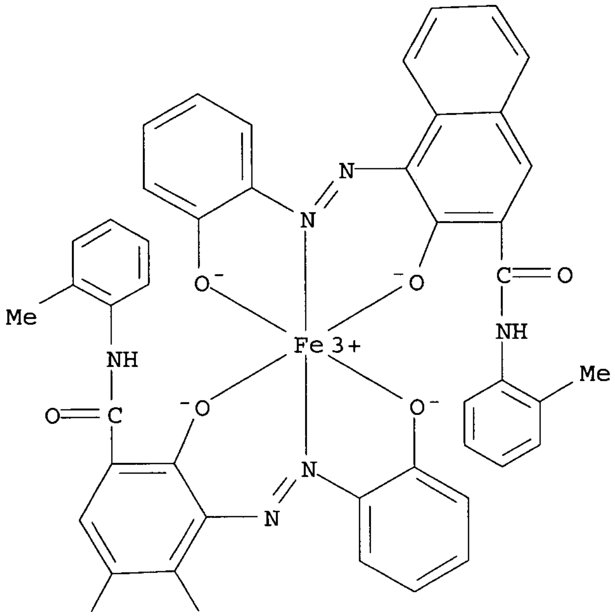
PAGE 3-A



● K^+

RN 174304-88-2 USPATFULL
CN Ferrate(1-), bis[3-hydroxy-4-[(2-hydroxyphenyl)azo]-N-(2-methylphenyl)-2-naphthalenecarboxamidato(2-)]-, hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

● H+

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L84  ANSWER 69 OF 105  USPATFULL on STN
ACCESSION NUMBER:       2001:91487  USPATFULL
TITLE:                  Toner for electrophotography
INVENTOR(S):            Suwa, Yoshihito, Shizuoka-shi, Japan
                        Okuyama, Hisashi, Kyoto, Japan
                        Horibe, Yasumasa, Kyoto, Japan

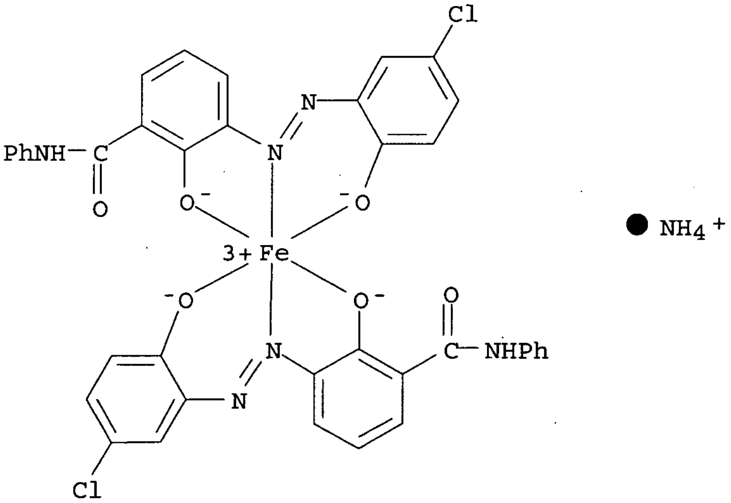
                            NUMBER        KIND    DATE
                        --------------- ------ --------
PATENT INFORMATION:     US 2001003636      A1   20010614
                        US 6432600         B2   20020813
APPLICATION INFO.:      US 2000-730736     A1   20001207   (9)

                             NUMBER         DATE
                        ----------------- --------
PRIORITY INFORMATION:   JP 1999-352412     19991210
DOCUMENT TYPE:          Utility
```

FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: NEXON & VANDERHYE P.C., 1100 North Glebe Rd., 8th Floor, Arlington, VA, 22201-4714
NUMBER OF CLAIMS: 11
EXEMPLARY CLAIM: 1
LINE COUNT: 855
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Toner used for electrophotography includes a polylactic acid type biodegradable resin and a terpene-phenol **copolymer.** The molar concentration of one of the L-lactic acid units and D-lactic acid units in a lactic acid component of the polylactic acid type biodegradable resin is in the range between about 75 mol % and about 98 mol %. The terpene-phenol **copolymer** may include at least one composition selected from the group consisting of: (a) cyclic terpene-phenol **copolymer**, prepared by **copolymerizing** cyclic terpene and phenol; (b) cyclic terpene/phenol (1:2 molar ratio) addition product, prepared by adding two molecules of phenol to one molecule of cyclic terpene; (c) polycyclic terpene/phenol (1:2 molar ratio) addition product, prepared by a condensation reaction of the cyclic terpene/phenol (1:2 molar ratio) addition product with one of aldehyde and ketone; and (d) polycyclic terpene/phenol (1:1 molar ratio) addition product, prepared by a condensation reaction of a cyclic terpene/phenol (1:1 molar ratio) addition product with one of aldehyde and ketone. The toner of the invention is applicable to a full-color toner.

IT **156108-08-6**
(T 77; toner for electrophotog. having poly(lactic acid)-type biodegradable resin and terpene-phenol **polymer**)
RN 156108-08-6 USPATFULL
CN Ferrate(1-), bis[3-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-(hydroxy-κO)-N-phenylbenzamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)



L84 ANSWER 70 OF 105 USPATFULL on STN
ACCESSION NUMBER: 2001:93499 USPATFULL
TITLE: Method for limiting the growth of microorganisms using metal-containing compounds
INVENTOR(S): Landgrebe, Kevin D., Woodbury, MN, United States
Shelburne, Charles E., Brooklyn Park, MN, United States

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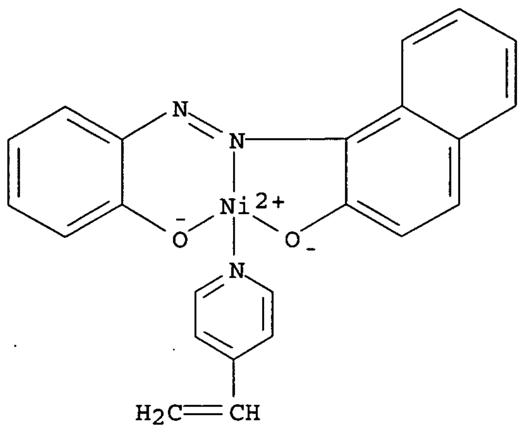
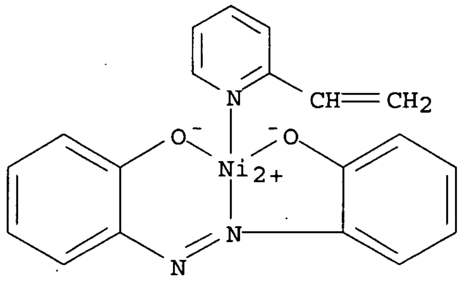
                        Smith, Terrance P., Woodbury, MN, United States
                        Cuny, Gregory D., Hudson, MA, United States
PATENT ASSIGNEE(S):     3M Innovative Properties Company, St. Paul, MN, United
                        States (U.S. corporation)

                            NUMBER       KIND    DATE
                        --------------- ------ --------
PATENT INFORMATION:     US 6248733       B1    20010619
APPLICATION INFO.:      US 1998-4892           19980109  (9)
DOCUMENT TYPE:          Utility
FILE SEGMENT:           GRANTED
PRIMARY EXAMINER:       Dees, Jose' G.
ASSISTANT EXAMINER:     Pryor, Alton
LEGAL REPRESENTATIVE:   Rogers, James A.
NUMBER OF CLAIMS:       42
EXEMPLARY CLAIM:        1
LINE COUNT:             1444
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB     This invention relates to the use of compounds having the general
       structure: ##STR1##

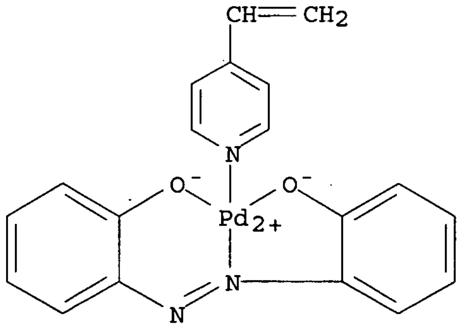
       wherein: Z1 and Z2 each independently represent an arene nucleus, which
       has from 5 to 14 ring atoms; G1 and G2 each independently represent a
       metal ligating group; R represents a hydrogen atom, a halogen atom, an
       alkyl group, an acylamino group, an alkoxy group, a sulfonamido group,
       an aryl group, a thiol group, an alkylthio group, an arylthio group, an
       alkylamino group, an arylamino group, an amino group, an alkoxycarbonyl
       group, an acyloxy group, a nitro group, a cyano group, an alkylsulfonyl
       group, an arylsulfonyl group, an alkylsulfoxyl group, an arylsulfoxyl
       group, an aryloxyl group, a hydroxyl group, a thioamido group, a
       carbamoyl group, a suffamoyl group, a formyl group, an acyl group, a
       ureido group, an aryloxycarbonyl group, a silyl group, or a sulfoalkoxy
       group; L1 represents a nitrogen heterocycle; L2 represents a monodentate
       or polydentate (e.g., bidentate) ligand; X represents nitrogen or a
       methine (CH) group; M is a divalent or polyvalent transition metal ion
       where the coordination number is at least 4; and k, m, and n are whole
       numbers less than or equal to 3 as antimicrobial agents to inhibit the
       growth or replication of microorganisms such as viruses, bacteria, and
       fungi.
IT   147044-74-4P 147312-53-6P 147361-09-9P
       147361-10-2P 147361-15-7P 147469-42-9P
       147486-63-3P 148250-53-7P 158680-57-0P
       163857-99-6P 222989-09-5P 222989-10-8P
       222989-11-9P 222989-12-0P 222989-13-1P
       222989-16-4P 231633-24-2P 231633-26-4P
       231633-27-5P 231633-29-7P 231633-30-0P
        (preparation as microbicide and virucide)
RN   147044-74-4  USPATFULL
CN   Nickel, (4-ethenylpyridine)[1-[[2-(hydroxy-κO)phenyl]azo-κN1]-
       2-naphthalenolato(2-)-κO]- (9CI)  (CA INDEX NAME)
```



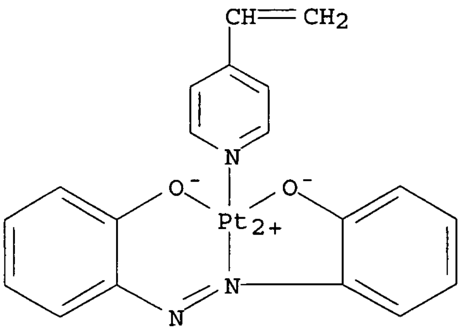
RN 147312-53-6 USPATFULL
CN Nickel, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](2-ethenylpyridine)- (9CI) (CA INDEX NAME)



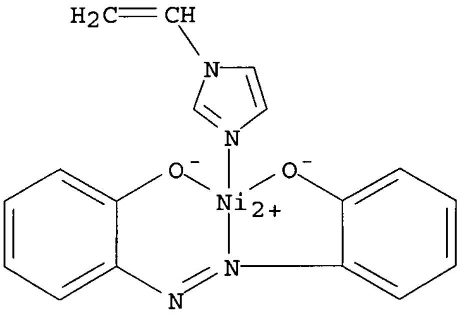
RN 147361-09-9 USPATFULL
CN Palladium, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](4-ethenylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)



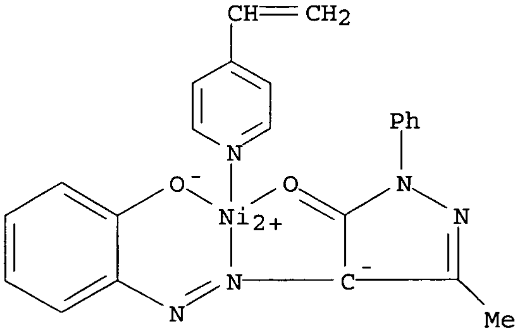
RN 147361-10-2 USPATFULL
CN Platinum, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](4-ethenylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)



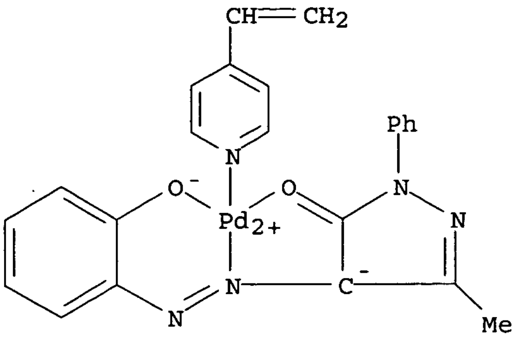
RN 147361-15-7 USPATFULL
CN Nickel, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](1-ethenyl-1H-imidazole-κN3)- (9CI) (CA INDEX NAME)



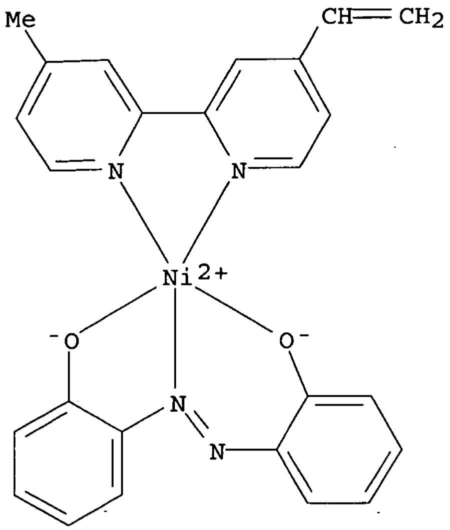
RN 147469-42-9 USPATFULL
CN Nickel, [2,4-dihydro-4-[[2-(hydroxy-κO)phenyl]azo-κN1]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)-κO3](4-ethenylpyridine)- (9CI) (CA INDEX NAME)



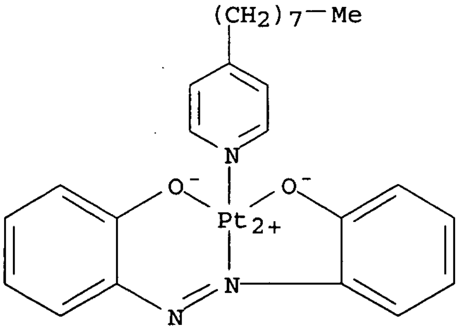
RN 147486-63-3 USPATFULL
CN Palladium, [2,4-dihydro-4-[[2-(hydroxy-κO)phenyl]azo-κN1]-5-methyl-2-phenyl-3H-pyrazol-3-onato(2-)-κO3](4-ethenylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 148250-53-7 USPATFULL
CN Nickel, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](4-ethenyl-4'-methyl-2,2'-bipyridine-κN1,κN1')- (9CI) (CA INDEX NAME)

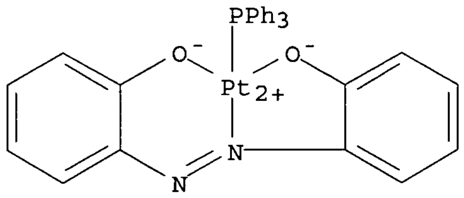


RN 158680-57-0 USPATFULL
CN Platinum, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](4-octylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)



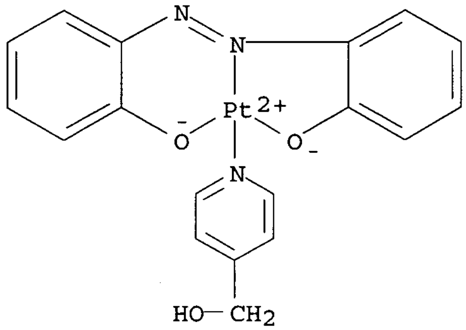
RN 163857-99-6 USPATFULL

CN Platinum, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](triphenylphosphine)-, (SP-4-4)- (9CI) (CA INDEX NAME)



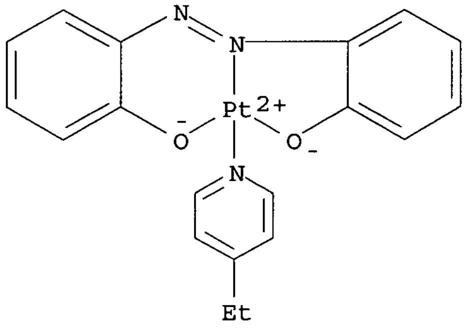
RN 222989-09-5 USPATFULL

CN Platinum, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](4-pyridinemethanol-κN1)-, (SP-4-2)- (9CI) (CA INDEX NAME)



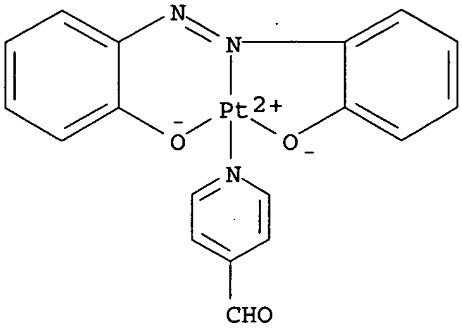
RN 222989-10-8 USPATFULL

CN Platinum, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](4-ethylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)



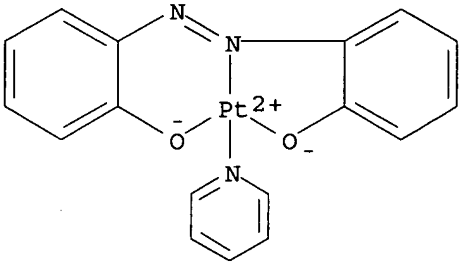
RN 222989-11-9 USPATFULL

CN Platinum, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](4-pyridinecarboxaldehyde-κN1)-, (SP-4-2)- (9CI) (CA INDEX NAME)



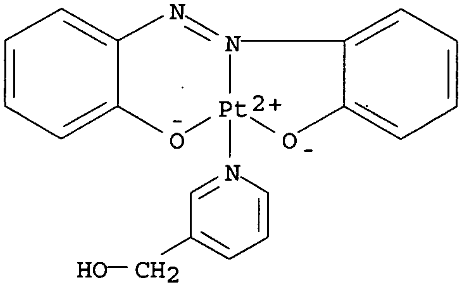
RN 222989-12-0 USPATFULL

CN Platinum, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](pyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)



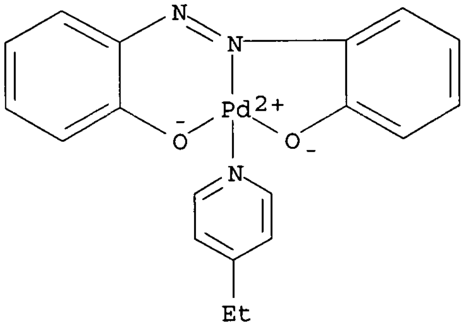
RN 222989-13-1 USPATFULL

CN Platinum, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](3-pyridinemethanol-κN1)-, (SP-4-2)- (9CI) (CA INDEX NAME)

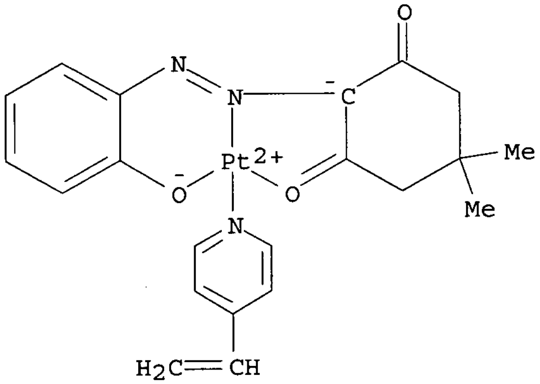


RN 222989-16-4 USPATFULL

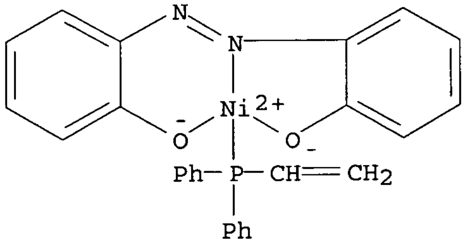
CN Palladium, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](4-ethylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)



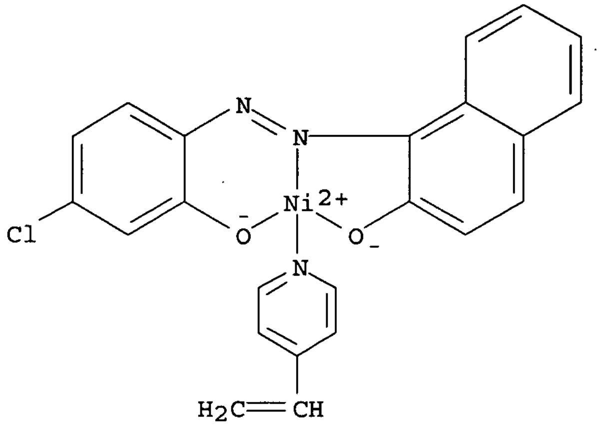
RN 231633-24-2 USPATFULL
CN Platinum, (4-ethenylpyridine)[2-[[2-(hydroxy-κO)phenyl]azo-κN1]-5,5-dimethyl-1,3-cyclohexanedionato(2-)-κO]-, (SP-4-2)-(9CI) (CA INDEX NAME)



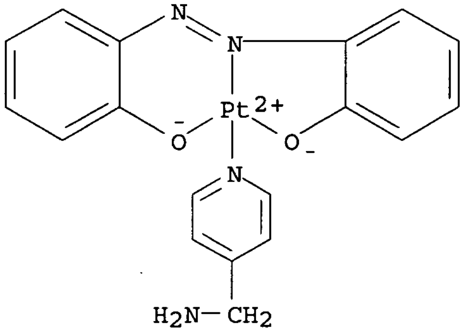
RN 231633-26-4 USPATFULL
CN Nickel, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](ethenyldiphenylphosphine)- (9CI) (CA INDEX NAME)



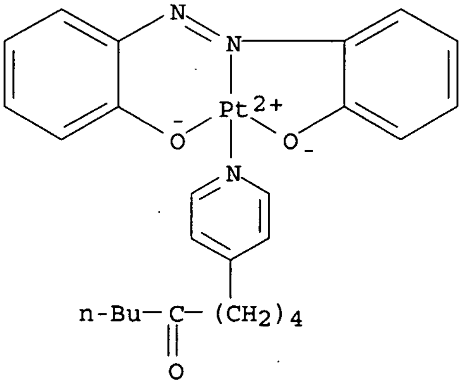
RN 231633-27-5 USPATFULL
CN Nickel, [1-[[4-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-naphthalenolato(2-)-κO](4-ethenylpyridine)- (9CI) (CA INDEX NAME)



RN 231633-29-7 USPATFULL
CN Platinum, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](4-pyridinemethanamine-κN1)-, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 231633-30-0 USPATFULL
CN Platinum, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)][1-(4-pyridinyl-κN)-5-nonanone]-, (SP-4-2)- (9CI) (CA INDEX NAME)



L84 ANSWER 71 OF 105 USPATFULL on STN

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ACCESSION NUMBER:        2000:91670  USPATFULL
TITLE:                   Toner for developing electrostatic image, image forming
                         method and process cartridge
INVENTOR(S):             Tomiyama, Koichi, Yokohama, Japan
                         Kohtaki, Takaaki, Yokohama, Japan
                         Ohno, Manabu, Funabashi, Japan
                         Unno, Makoto, Tokyo, Japan
                         Mikuriya, Yushi, Kawasaki, Japan
                         Okubo, Nobuyuki, Yokohama, Japan
                         Doujo, Tadashi, Kawasaki, Japan
                         Suzuki, Shunji, Tokyo, Japan
PATENT ASSIGNEE(S):      Canon Kabushiki Kaisha, Tokyo, Japan (non-U.S.
                         corporation)

                              NUMBER        KIND    DATE
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PATENT INFORMATION:      US 6090515              20000718
APPLICATION INFO.:       US 1997-862353          19970523  (8)
RELATED APPLN. INFO.:    Continuation-in-part of Ser. No. US 1995-436823, filed
                         on 8 May 1995, now abandoned

                                NUMBER        DATE
                         ----------------- --------
PRIORITY INFORMATION:    JP 1994-123303     19940513
DOCUMENT TYPE:           Utility
FILE SEGMENT:            Granted
PRIMARY EXAMINER:        Rodee, Christopher D.
LEGAL REPRESENTATIVE:    Fitzpatrick, Cella, Harper & Scinto
NUMBER OF CLAIMS:        38
EXEMPLARY CLAIM:         1
NUMBER OF DRAWINGS:      5 Drawing Figure(s); 4 Drawing Page(s)
LINE COUNT:              2514
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB       A toner for developing electrostatic images includes a binder resin, a
         specific long-chain alkyl compound and a specific azo iron complex. The
         long-chain alkyl compound contains a terminal --OH or --COOH group and
         from about 35 to 150 (--CH.sub.2 --) groups. The azo iron complex has a
         cation including 75-98 mol. % of ammonium ion and another ion which is
         hydrogen, sodium, potassium or mixtures thereof.
IT    104815-18-1D, solid solution containing 106586-16-7D, solid
        solution containing 106616-48-2D, solid solution containing
        119029-85-5D, solid solution containing 125304-21-4D, solid
        solution containing 131494-75-2D, solid solution containing
        163669-67-8D, solid solution containing 163756-19-2D, solid
        solution containing 163756-22-7D, solid solution containing
        284490-04-6D, solid solution containing 284490-05-7D, solid
        solution containing 284490-10-4D, solid solution containing
        284490-11-5D, solid solution containing
          (charge control agent for electrophotog toner)
RN    104815-18-1  USPATFULL
CN    Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-
        (hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium
        (9CI)  (CA INDEX NAME)
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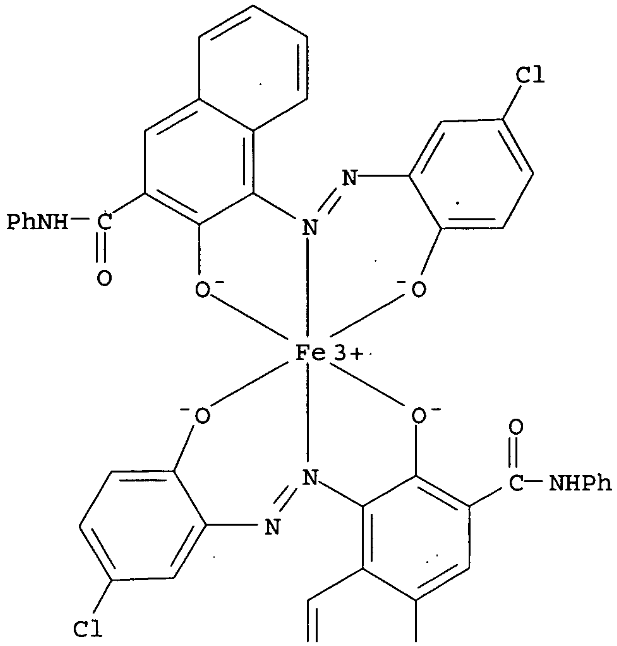
PAGE 1-A



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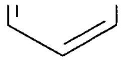
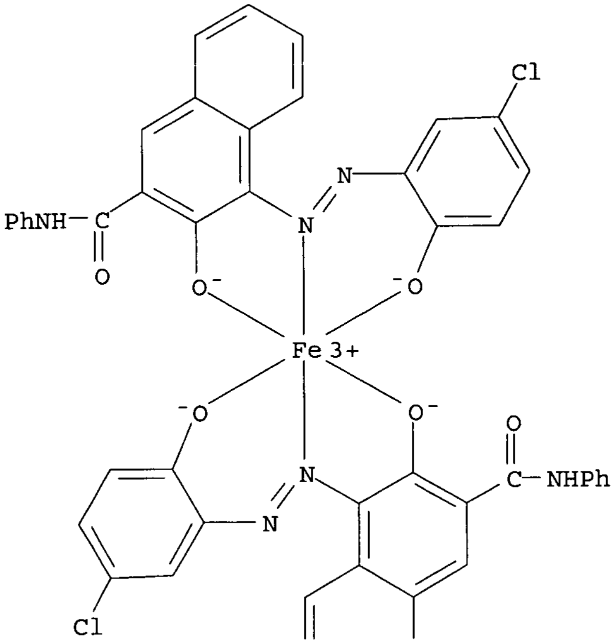


● NH_4^+

RN 106586-16-7 USPATFULL
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-
(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, potassium
(9CI) (CA INDEX NAME)

PAGE 1-A



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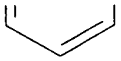

● K$^+$

RN 106616-48-2 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-(3-nitrophenyl)-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

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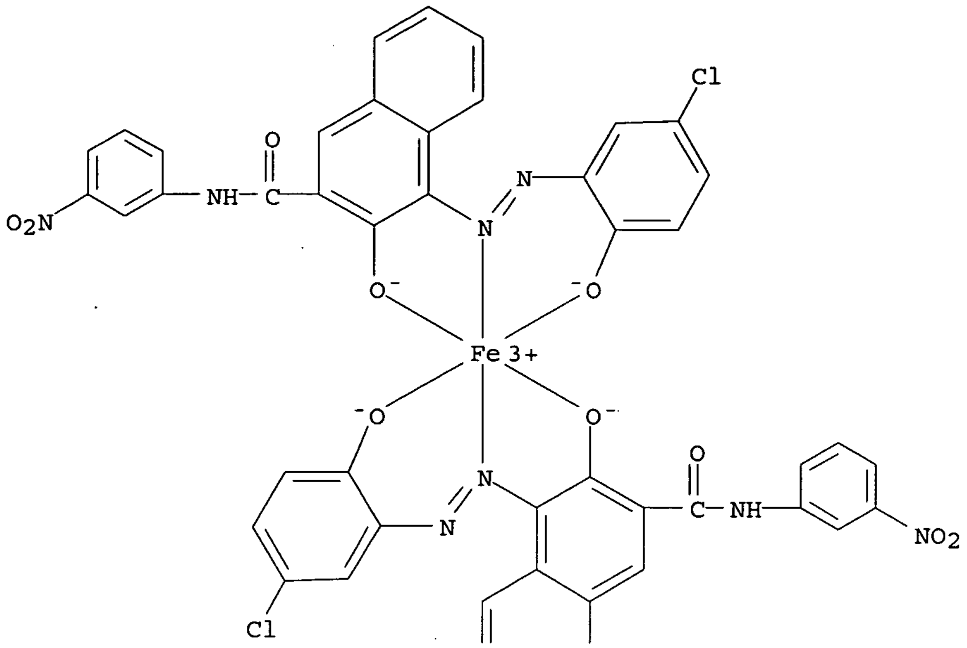

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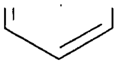
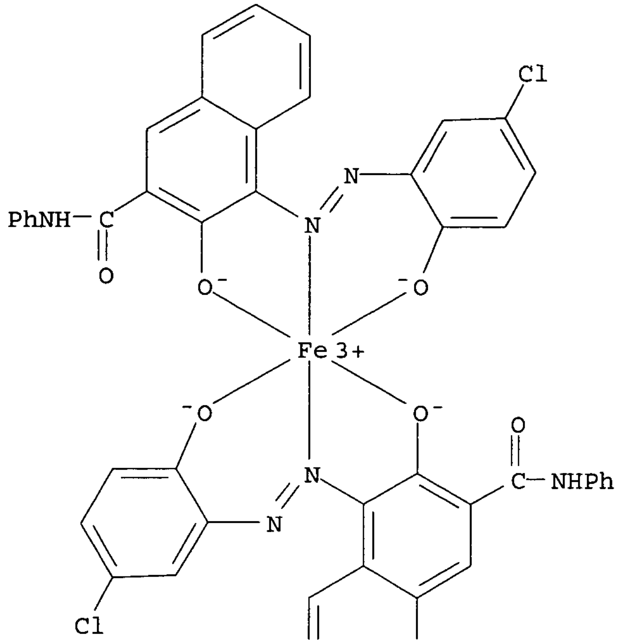


● NH_4^+

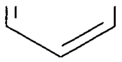
RN 119029-85-5 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



● H^+

RN 125304-21-4 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, sodium (9CI) (CA INDEX NAME)

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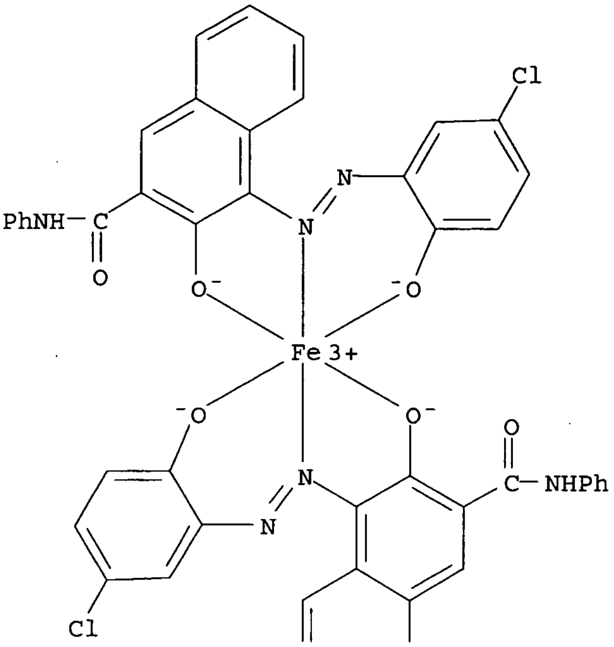
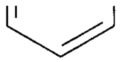


PAGE 2-A



● Na+

RN 131494-75-2 USPATFULL

CN Ferrate(1-), bis[4-[[3,5-dichloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, sodium (9CI) (CA INDEX NAME)

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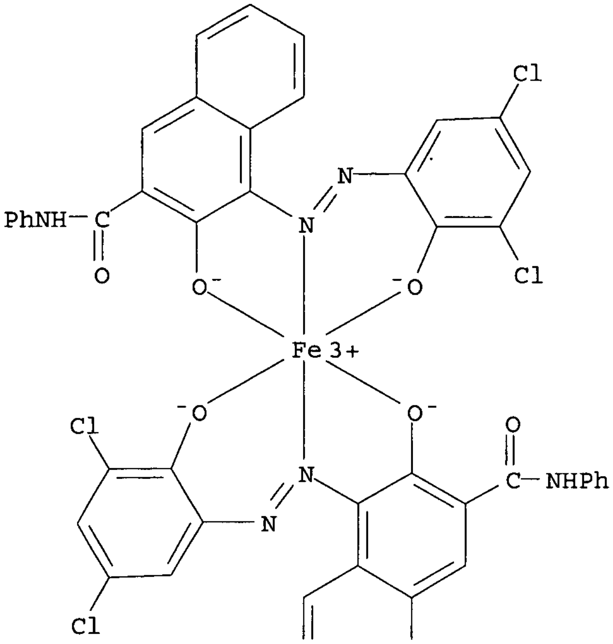

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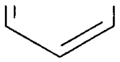

● Na$^+$

RN 163669-67-8 USPATFULL
CN Ferrate(1-), bis[4-[[3,5-dichloro-2-(hydroxy-κO)phenyl]azo-
κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-
, ammonium (9CI) (CA INDEX NAME)

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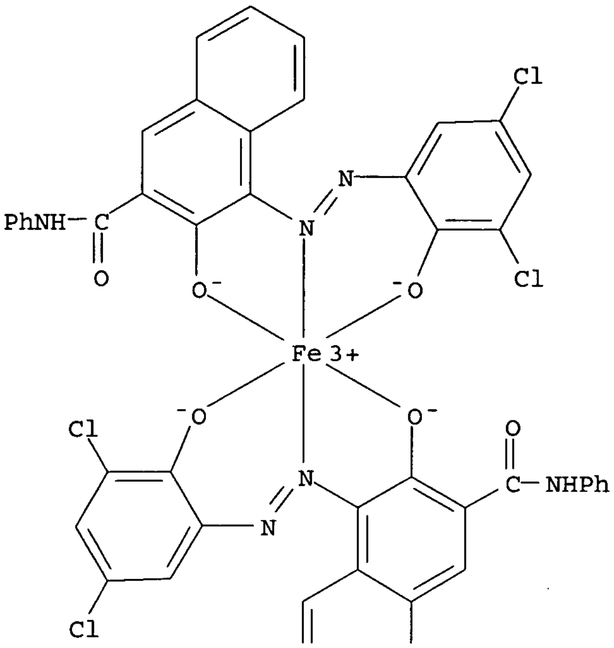

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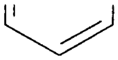
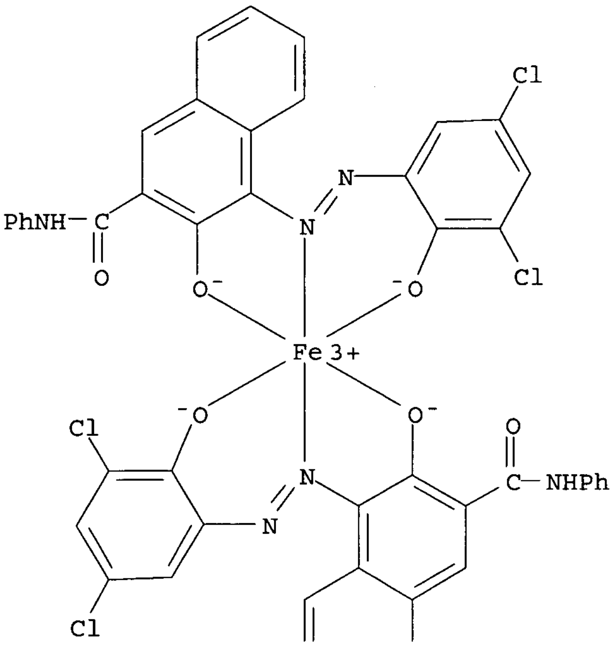


● NH_4^+

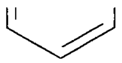
RN 163756-19-2 USPATFULL

CN Ferrate(1-), bis[4-[[3,5-dichloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



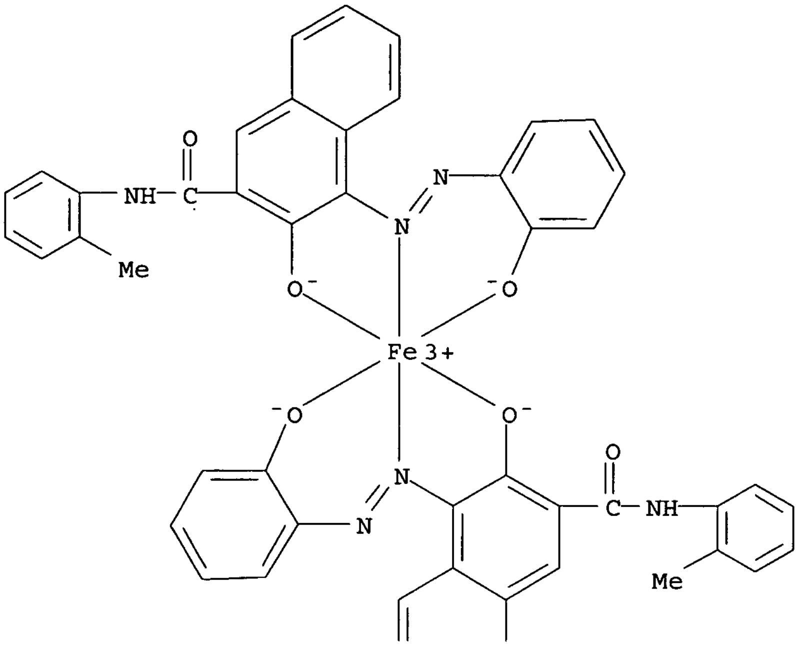
PAGE 2-A



● H^+

RN 163756-22-7 USPATFULL
CN Ferrate(1-), bis[3-(hydroxy-κO)-4-[[2-(hydroxy-κO)phenyl]azo-
κN1]-N-(2-methylphenyl)-2-naphthalenecarboxamidato(2-)]-, ammonium
(9CI) (CA INDEX NAME)

PAGE 1-A



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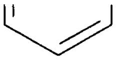
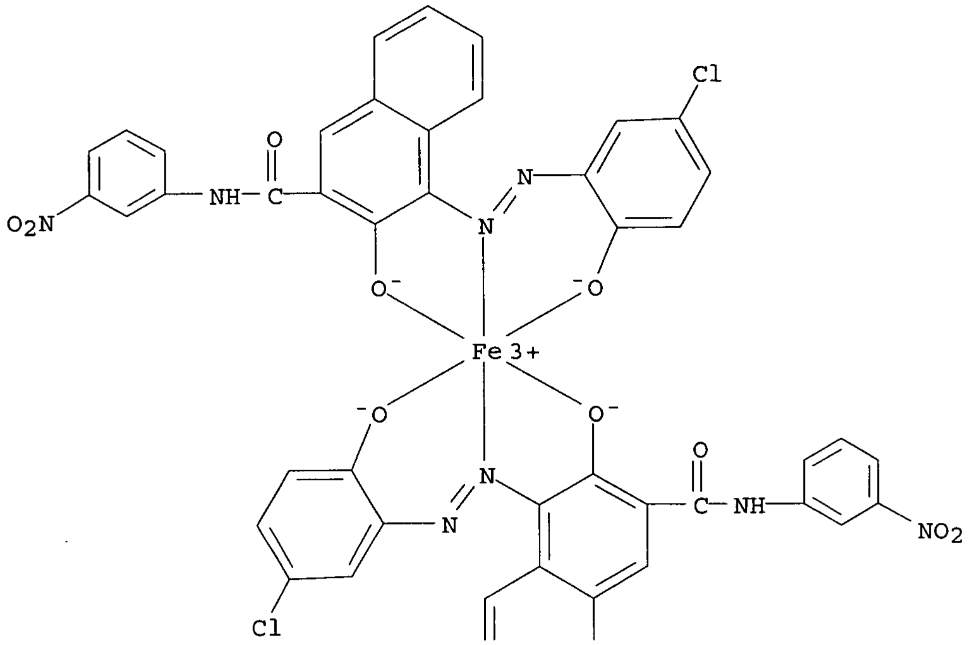


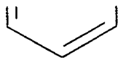
● NH_4^+

RN 284490-04-6 USPATFULL
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-
(hydroxy-κO)-N-(3-nitrophenyl)-2-naphthalenecarboxamidato(2-)]-,
potassium (9CI) (CA INDEX NAME)

PAGE 1-A



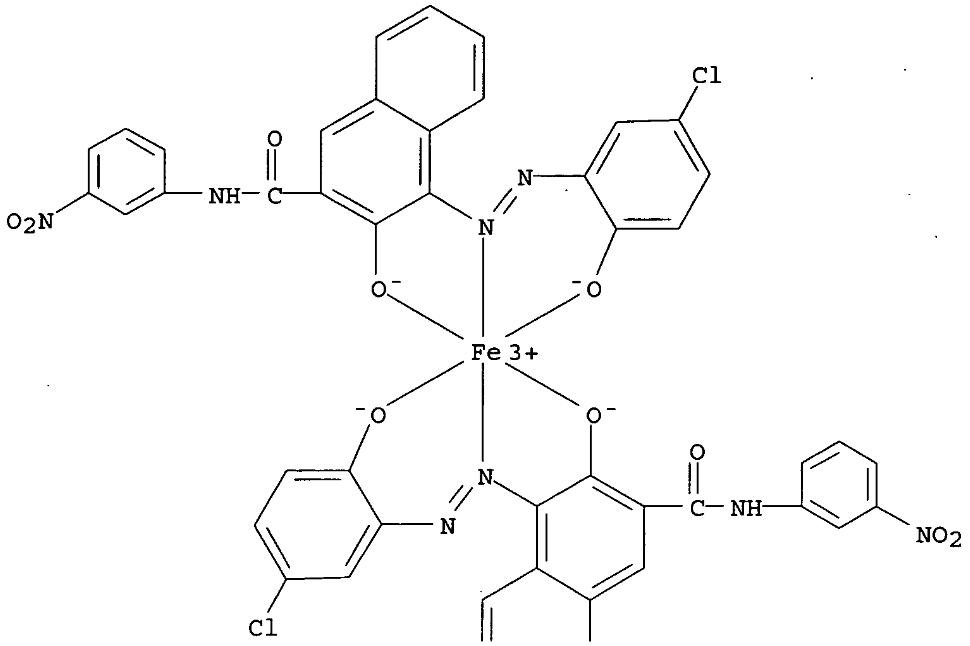
PAGE 2-A



● K^+

RN 284490-05-7 USPATFULL
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-(3-nitrophenyl)-2-naphthalenecarboxamidato(2-)]-, hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



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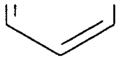

● H^+

RN 284490-10-4 USPATFULL
CN Ferrate(1-), bis[3-(hydroxy-κO)-4-[[2-(hydroxy-κO)phenyl]azo-
κN1]-N-(2-methylphenyl)-2-naphthalenecarboxamidato(2-)]-, sodium
(9CI) (CA INDEX NAME)

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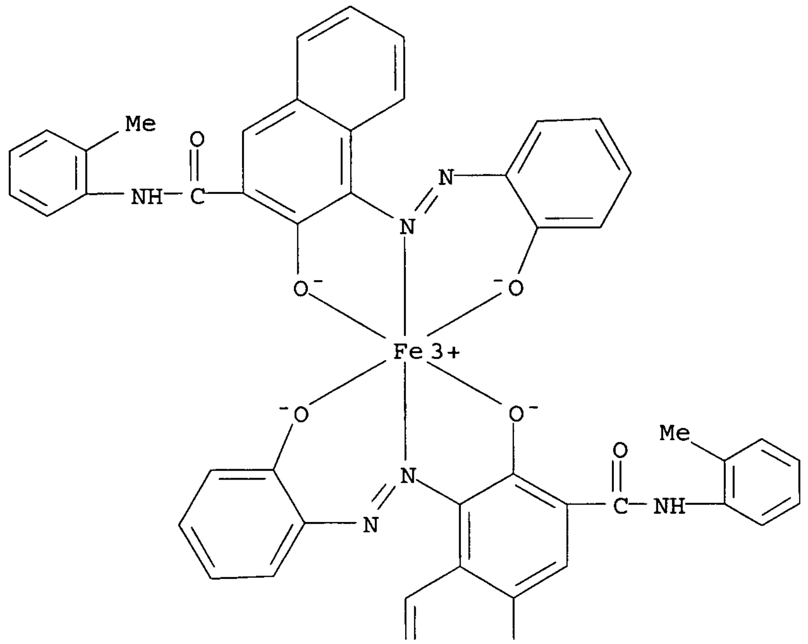

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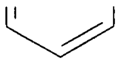
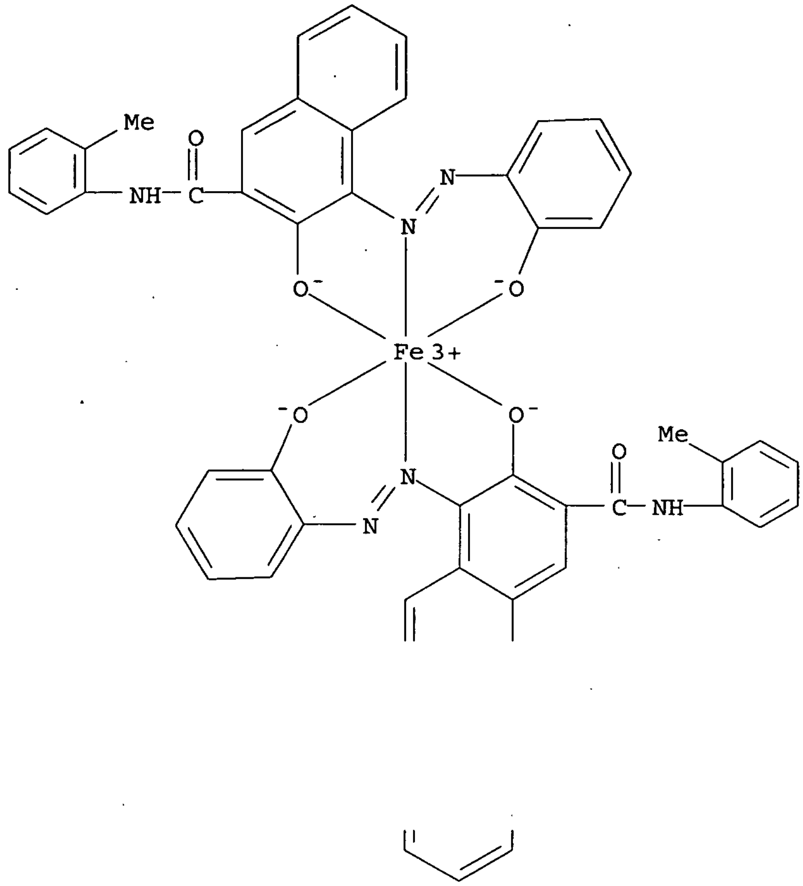


● Na^+

RN 284490-11-5 USPATFULL
CN Ferrate(1-), bis[3-(hydroxy-κO)-4-[[2-(hydroxy-κO)phenyl]azo-κN1]-N-(2-methylphenyl)-2-naphthalenecarboxamidato(2-)]-, hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

● H^+

L84 ANSWER 72 OF 105 USPATFULL on STN
ACCESSION NUMBER: 1999:136901 USPATFULL
TITLE: Toner and image forming method
INVENTOR(S): Matsunaga, Satoshi, Mishima, Japan
Tomiyama, Koichi, Numazu, Japan
Mizoh, Yuichi, Shizuoka-ken, Japan
Nozawa, Keita, Shizuoka-ken, Japan
Endo, Minekazu, Numazu, Japan
Doujo, Tadashi, Numazu, Japan
Ogawa, Yoshihiro, Numazu, Japan
Shibayama, Nene, Mishima, Japan
PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Tokyo, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5976752		19991102	
APPLICATION INFO.:	US 1998-135167		19980818	(9)

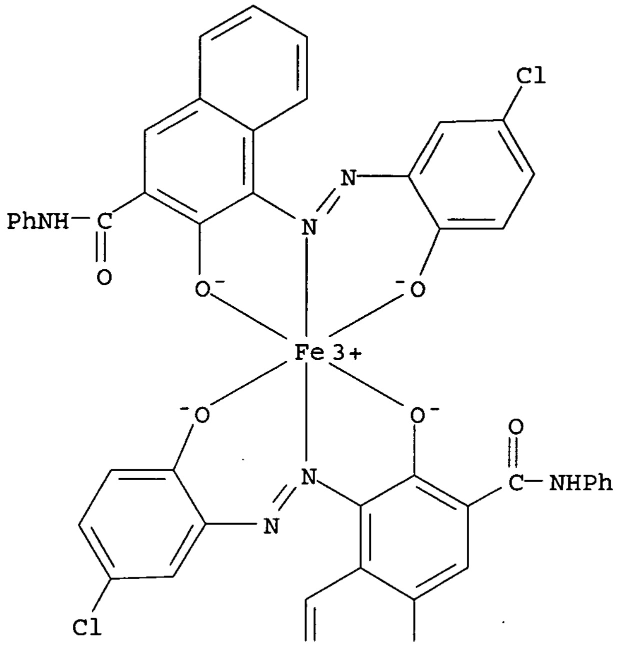
	NUMBER	DATE
PRIORITY INFORMATION:	JP 1997-224142	19970821
	JP 1997-328185	19971128
	JP 1998-54929	19980306
	JP 1998-155095	19980604

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Martin, Roland
LEGAL REPRESENTATIVE: Fitzpatrick, Cella, Harper and Scinto
NUMBER OF CLAIMS: 152
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 19 Drawing Figure(s); 17 Drawing Page(s)
LINE COUNT: 4335
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An electrophotographic toner is composed of at least a binder resin, a colorant, and a wax. The binder resin (a) comprises a polyester resin, a vinyl resin and a hybrid resin component comprising a polyester unit and a vinyl **polymer** unit, (b) has a THF (tetrahydrofuran)-soluble content (W1) of 50-85 weight % and a THF-insoluble content (W2) of 5-50 weight %, an ethyl acetate-soluble content (W3) of 40-98 weight % and an ethyl acetate-insoluble content (W4) of 2-60 weight %, a chloroform-soluble content (W5) of 55-90 weight % and a chloroform-insoluble content (W6) of 10-45 weight %, respectively after 10 hours of Soxhlet extraction with respective solvents, giving a ratio W4/S6 of 1.1-4.0, and contains a THF-soluble content providing a GPC (gel permeation chromatography) chromatogram exhibiting a main peak in a molecular weight range of 4000-9000, including 35.0-65.0% (A1) of a component haing molecular weights in a range of 500 to below 1+10.sup.4, 25.0-45.0% (A2) of a component having molecular weights in a range of 1+10.sup.4 to below 1+10.sup.5 and 10.0-30.0% (A3) of a component having molecular weights of at least 1+10.sup.5 giving a ratio A1/A2 of 1.05-2.00. The binder resin shows good dispersibility of wax and colorant.

IT **167548-21-2**
(electrophotog. toners comprising binders comprising polyesters, vinyl resins, and polyester-vinyl hybrid resins and)
RN 167548-21-2 USPATFULL
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]- (9CI) (CA INDEX NAME)

PAGE 1-A



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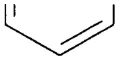

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L84  ANSWER 73 OF 105  USPATFULL on STN
ACCESSION NUMBER:      1999:132443  USPATFULL
TITLE:                 Toner for developing electrostatic image,
                       process-cartridge and image forming method
INVENTOR(S):           Katada, Masaichiro, Sohka, Japan
                       Kasuya, Takashige, Sohka, Japan
                       Kobori, Takakuni, Kawasaki, Japan
PATENT ASSIGNEE(S):    Canon Kabushiki Kaisha, Tokyo, Japan (non-U.S.
                       corporation)

                            NUMBER       KIND    DATE
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PATENT INFORMATION:    US 5972553             19991026
APPLICATION INFO.:     US 1996-736937         19961025  (8)

                              NUMBER         DATE
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PRIORITY INFORMATION:  JP 1995-303311    19951030
                       JP 1995-303386    19951030
                       JP 1996-214091    19960726
DOCUMENT TYPE:         Utility
FILE SEGMENT:          Granted
PRIMARY EXAMINER:      Rodee, Christopher D.
```

LEGAL REPRESENTATIVE: Fitzpatrick, Cella, Harper & Scinto
NUMBER OF CLAIMS: 41
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 8 Drawing Figure(s); 6 Drawing Page(s)
LINE COUNT: 2619
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

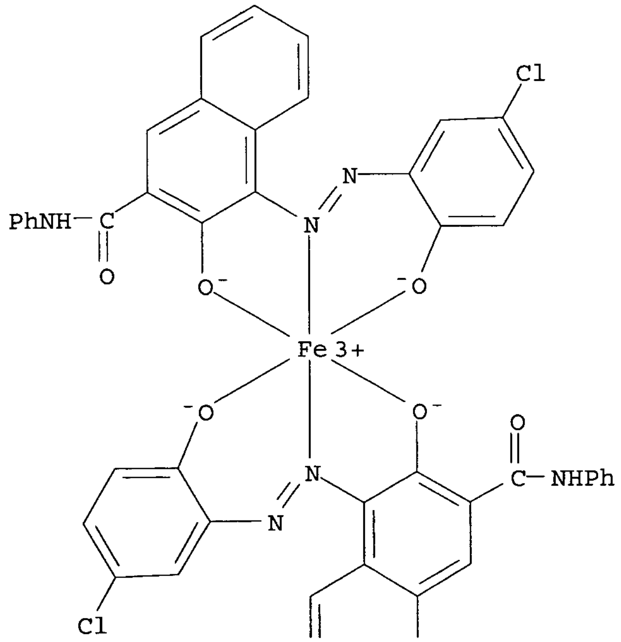
AB A toner for developing an electrostatic image is composed from a composition including: **polymer** components, a colorant, a wax and a charge-controlling agent. The **polymer** components are characterized by (a) containing substantially no THF (tetrahydrofuran)-insoluble content; (b) containing a THF-soluble content giving a GPC (gel permeation chromatography) chromatogram showing a main peak in a molecular weight region of 3+10.sup.3 -3+10.sup.4, and a sub-peak or shoulder in a molecular weight region of 1+10.sup.5 -3+10.sup.6, and (c) including a low-molecular weight **polymer** component having molecular weights of below 5+10.sup.4 on the GPC chromatogram and an acid value A.sub.VL, and a high-molecular weight **polymer** component having molecular weights of at least 5+10.sup.4 and an acid value A.sub.VH satisfying A.sub.VL >A.sub.VH. The wax has an acid value A.sub.VWax satisfying A.sub.VL >A.sub.VWax and A.sub.VWax >0 (mgKOH/g). The toner is characterized by a good combination of low-temperature fixability and anti-offset characteristic, a stable chargeability, and freeness from sleeve ghost phenomenon.

IT **104815-18-1**
(electrophotog. toners for process cartridges containing)

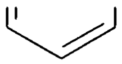
RN 104815-18-1 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



● NH_4^+

```
L84  ANSWER 74 OF 105  USPATFULL on STN
ACCESSION NUMBER:        1999:110466  USPATFULL
TITLE:                   Azo compound and polarizing film
INVENTOR(S):             Misawa, Tsutami, Kanagawa-ken, Japan
                         Ogiso, Akira, Fukuoka-ken, Japan
                         Imai, Rihoko, Tokyo, Japan
                         Itoh, Hisato, Kanagawa-ken, Japan
PATENT ASSIGNEE(S):      Mitsui Chemicals, Inc., Tokyo, Japan (non-U.S.
                         corporation)

                              NUMBER        KIND    DATE
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PATENT INFORMATION:      US 5952477              19990914
APPLICATION INFO.:       US 1997-951159          19971015  (8)
RELATED APPLN. INFO.:    Division of Ser. No. US 1996-665554, filed on 18 Jun
                         1996, now abandoned which is a division of Ser. No. US
                         1994-223740, filed on 6 Apr 1994, now patented, Pat.
                         No. US 5618868

                                NUMBER        DATE
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PRIORITY INFORMATION:    JP 1993-94057      19930421
                         JP 1993-94058      19930421
DOCUMENT TYPE:           Utility
FILE SEGMENT:            Granted
PRIMARY EXAMINER:        Krass, Frederick
LEGAL REPRESENTATIVE:    Burns, Doane, Swecker & Mathis, L.L.P.
NUMBER OF CLAIMS:        9
EXEMPLARY CLAIM:         1
LINE COUNT:              904
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB       The present invention is concerned with a novel azo compound represented
         by formula (1), (2) or (3), a water-soluble dye comprising this azo
         compound, and a polarizing film containing this azo compound. The
         obtained polarizing film has high hydrothermoresistance and a high
         polarization degree and is excellent in optical characteristics:
         ##STR1## wherein each of the groups is defined.
IT    166195-78-4P 166195-79-5P 166195-82-0P
        166281-22-7P
         (bis(naphthylazo)stilbene dyes and polarizing films containing them)
RN    166195-78-4  USPATFULL
CN    Nickelate(4-), [μ-[[3,3'-[1,2-ethenediylbis[(2-hydroxy-4,1-
        phenylene)azo]]bis[6-amino-4-hydroxy-2,7-naphthalenedisulfonato]](8-
        )]]di-, tetrahydrogen (9CI)  (CA INDEX NAME)
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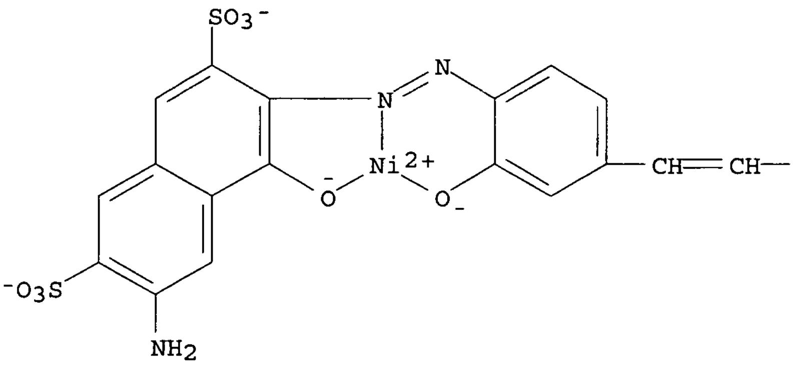
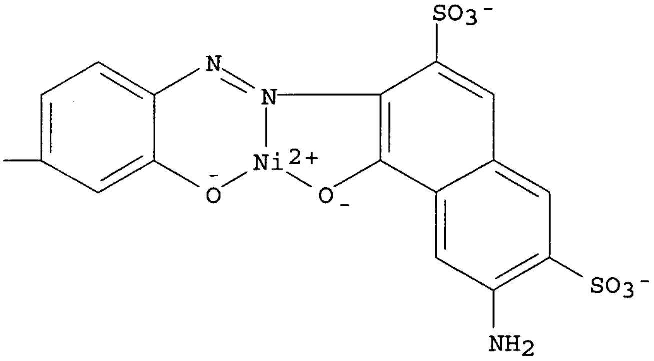
PAGE 1-A



● 4 H^+

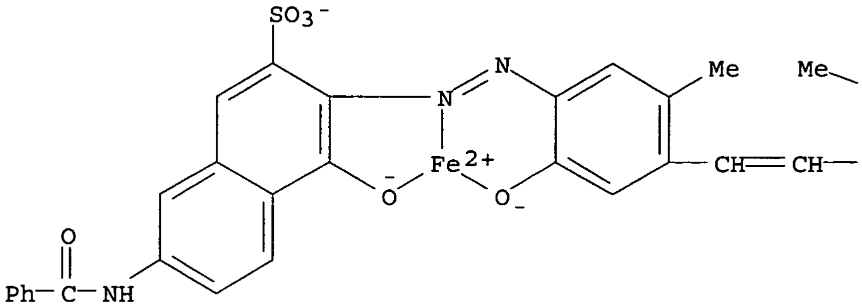
PAGE 1-B



RN 166195-79-5 USPATFULL

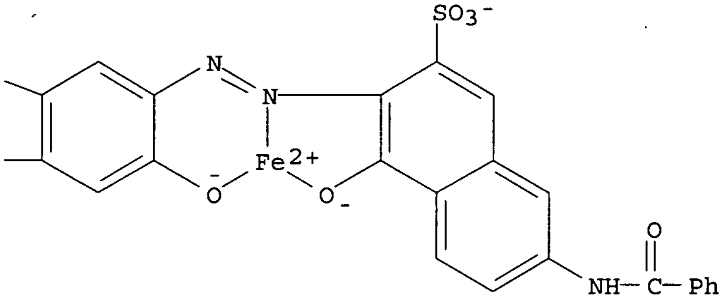
CN Ferrate(2-), [μ-[[3,3'-[1,2-ethenediylbis[(2-hydroxy-5-methyl-4,1-phenylene)azo]]bis[7-(benzoylamino)-4-hydroxy-2-naphthalenesulfonato]](6-)]]di-, dihydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



● 2 H^+

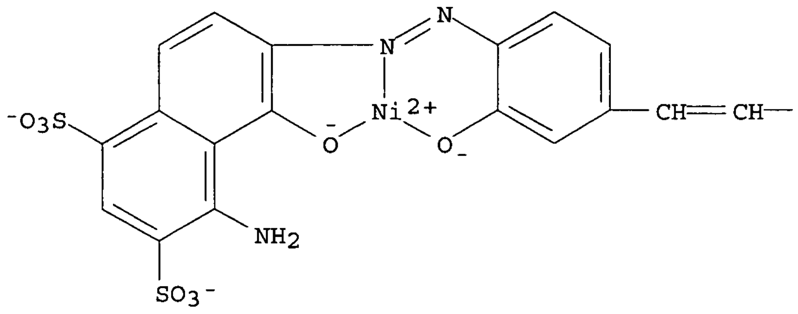
PAGE 1-B



RN 166195-82-0 USPATFULL

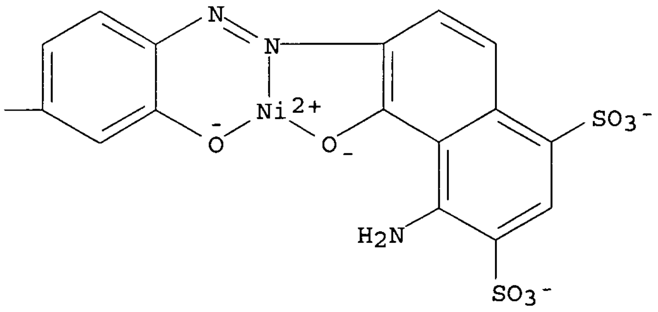
CN Nickelate(4-), [μ-[[6,6'-[1,2-ethenediylbis[(2-hydroxy-4,1-phenylene)azo]]bis[4-amino-5-hydroxy-1,3-naphthalenedisulfonato]](8-)]]di-, tetrahydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



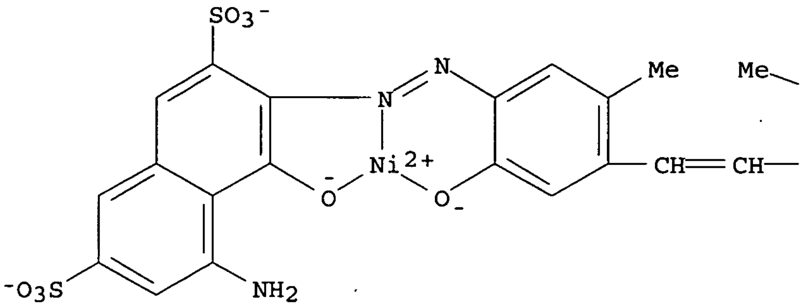
●4 H^+

PAGE 1-B



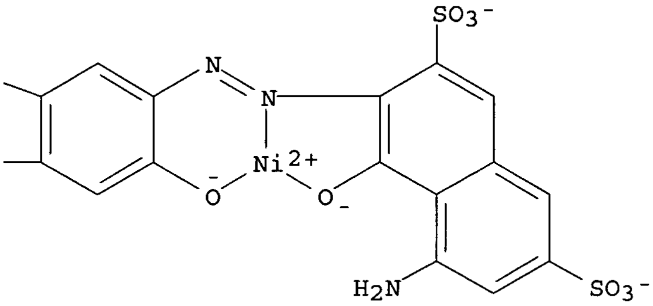
RN 166281-22-7 USPATFULL
CN Nickelate(4-), [μ-[[3,3'-[1,2-ethenediylbis[(2-hydroxy-5-methyl-4,1-phenylene)azo]]bis[5-amino-4-hydroxy-2,7-naphthalenedisulfonato]](6-)]]di-, tetrahydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



●4 H^+

PAGE 1-B



L84 ANSWER 75 OF 105 USPATFULL on STN

ACCESSION NUMBER: 1998:36500 USPATFULL

TITLE: Toner for developing electrostatic images, process cartridge, and image forming method

INVENTOR(S): Kasuya, Takashige, Soka, Japan
Suematsu, Hiroyuki, Yokohama, Japan
Tomiyama, Koichi, Yokohama, Japan
Yusa, Hiroshi, Machida, Japan
Kobori, Takakuni, Kawasaki, Japan
Katada, Masaichiro, Yokohama, Japan

PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Tokyo, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5736288		19980407	
APPLICATION INFO.:	US 1995-440935		19950515	(8)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1994-123302	19940513

JP 1994-196211 19940729
JP 1995-7424 19950120
JP 1995-11697 19950127

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Rodee, Christopher D.
LEGAL REPRESENTATIVE:	Fitzpatrick, Cella, Harper & Scinto
NUMBER OF CLAIMS:	50
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	6 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT:	3098

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

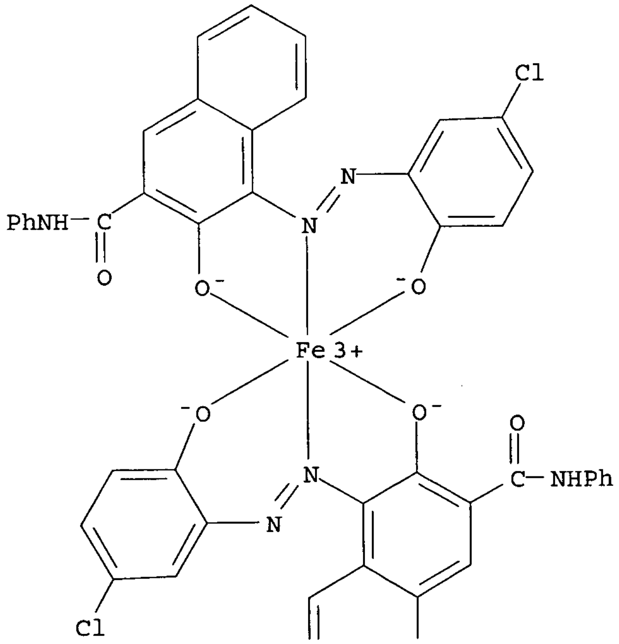
AB A toner is comprised of a composition containing at least a **polymer** component and a charge control agent. The **polymer** component contains substantially no tetrahydrofuran (THF)-insoluble matter. The **polymer** component THF-soluble has a major peak and a minor peak in the specific molecular weight regions in gel permeation chromatography (GPC). The low molecular weight component and high molecular weight component of the **polymer** component, each of which shows the specific molecular weight region in GPC, have the specific acid values, respectively. The difference between the acid values is in the specific range.

IT **104815-18-1**
(charge control agent for for electrostatog. toner and image formation)

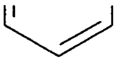
RN 104815-18-1 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



● NH_4^+

L84 ANSWER 76 OF 105 USPATFULL on STN
ACCESSION NUMBER: 1998:9306 USPATFULL
TITLE: Toner for developing electrostatic latent image
INVENTOR(S): Sato, Yukiya, Wakayama, Japan
Maruta, Masayuki, Wakayama, Japan
Ito, Yasushi, Wakayama, Japan
Nakamura, Genichi, Wakayama, Japan
PATENT ASSIGNEE(S): Kao Corporation, Tokyo, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5712074		19980127	
APPLICATION INFO.:	US 1997-779664		19970107	(8)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1996-19423	19960109

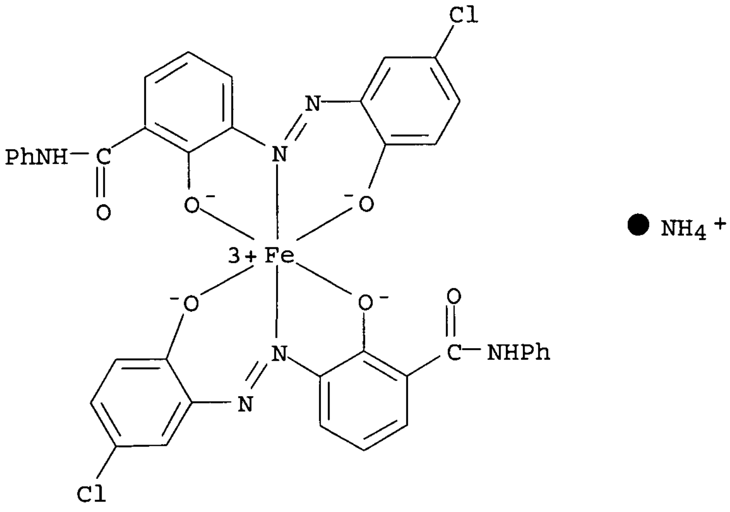
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Rodee, Christopher D.
LEGAL REPRESENTATIVE: Birch, Stewart, Kolasch & Birch, LLP
NUMBER OF CLAIMS: 9
EXEMPLARY CLAIM: 1
LINE COUNT: 1348
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A toner for developing an electrostatic latent image including a binder resin, a colorant, and a modified polysiloxane having the general formula (1): ##STR1## In the above general formula, R.sup.1 to R.sup.4, which may be identical or different, each stands for an alkyl group having 1 to 6 carbon atoms, a phenyl group, or a naphthyl group; R.sup.5 and R.sup.6, which may be identical or different, each stands for a linear or branched, saturated hydrocarbon group having an average number of carbon atoms of from 16 to 600; and n and m each stands for a number of zero (0) or more.

IT **156108-08-6**, T 77
(electrostatog. toners with good blocking resistance and free flowability containing polysiloxanes and)

RN 156108-08-6 USPATFULL

CN Ferrate(1-), bis[3-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-(hydroxy-κO)-N-phenylbenzamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)



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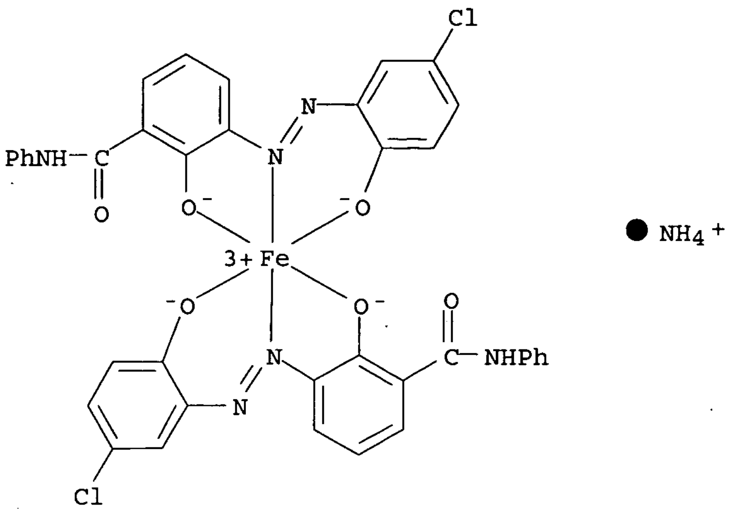
L84  ANSWER 77 OF 105  USPATFULL on STN
ACCESSION NUMBER:        97:49483  USPATFULL
TITLE:                   Nonmagnetic one-component toner
INVENTOR(S):             Shimizu, Jun, Wakayama, Japan
                         Sata, Shin-ichi, Wakayama, Japan
                         Hidaka, Yasuhiro, Wakayama, Japan
                         Maruta, Masayuki, Wakayama, Japan
PATENT ASSIGNEE(S):      Kao Corporation, Tokyo, Japan (non-U.S. corporation)

                              NUMBER        KIND    DATE
                         --------------- ------ --------
PATENT INFORMATION:      US 5637430             19970610
APPLICATION INFO.:       US 1996-654909         19960529  (8)

                                NUMBER        DATE
                         ----------------- --------
PRIORITY INFORMATION:    JP 1995-155399     19950529
DOCUMENT TYPE:           Utility
FILE SEGMENT:            Granted
PRIMARY EXAMINER:        Martin, Roland
NUMBER OF CLAIMS:        6
EXEMPLARY CLAIM:         1
LINE COUNT:              715
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB       The nonmagnetic one-component toner is usable in a developer device
         including a developer roller and a blade, the blade serving to regulate
         a toner layer formed on the developer roller into a uniform thickness
         and to supply electric charges to the toner by triboelectric charging,
         and the nonmagnetic one-component toner includes at least a binder
         resin, a colorant, and an iron compound. Here, the binder resin includes
         a polyester resin as a main component, and the iron compound has the
         general formula (I) and is contained in an amount of between 0.1 parts
         by weight or more and less than 1.0 part by weight, based on 100 parts
         by weight of the binder resin.
IT    156108-08-6, Aizen Spilon Black T 77
          (charge controlling agent; nonmagnetic one-component electrophotog.
          toner containing polyester and iron complex)
RN    156108-08-6  USPATFULL
```

CN Ferrate(1-), bis[3-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-(hydroxy-κO)-N-phenylbenzamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)



L84 ANSWER 78 OF 105 USPATFULL on STN

ACCESSION NUMBER: 97:29523 USPATFULL

TITLE: Polarizing film of a hydrophilic **polymer** film containing a novel azo compound

INVENTOR(S): Misawa, Tsutami, Kanagawa-ken, Japan
Ogiso, Akira, Fukuoka-ken, Japan
Imai, Rihoko, Tokyo, Japan
Itoh, Hisato, Kanagawa-ken, Japan

PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Inc., Tokyo, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5618868		19970408	
APPLICATION INFO.:	US 1994-223740		19940406	(8)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1993-94057	19930421
	JP 1993-94058	19930421

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Henderson, Christopher
LEGAL REPRESENTATIVE: Burns, Doane, Swecker & Mathis
NUMBER OF CLAIMS: 6
EXEMPLARY CLAIM: 1
LINE COUNT: 828

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

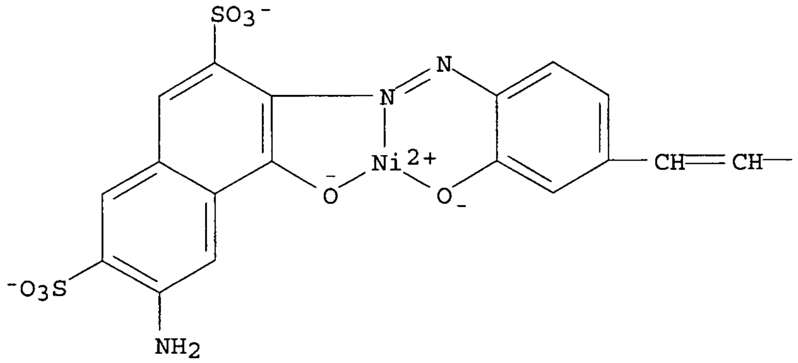
AB The present invention is concerned with a novel azo compound represented by formula (1), (2) or (3), a water-soluble dye comprising this azo compound, and a polarizing film containing this azo compound. The obtained polarizing film has high hydrothermoresistance and a high polarization degree and is excellent in optical characteristics: ##STR1## wherein each of R.sub.1, R.sub.3 and R.sub.12 is independently a hydrogen atom, halogen atom, hydroxyl group, alkyl group having 1 or 2 carbon atoms, or alkoxy group having 1 or 2 carbon atoms; each of R.sub.2, R.sub.4, R.sub.8 and R.sub.9 is independently a hydrogen atom, hydroxyl group, alkyl group having 1 or 2 carbon atoms, alkoxy group having 1 or 2 carbon atoms, or acetylamino group; R.sub.5 is a hydroxyl group or amino group at the o-position or p-position to the azo group; each of R.sub.6 and R.sub.10 is a hydrogen atom, carboxyl group, or alkoxy group having 1 or 2 carbon atoms; each of R.sub.7 and R.sub.11 is a hydrogen atom, hydroxyl group, amino group, methylamino group, β-hydroxyethylamino group, acetylamino group, or phenylamino or benzoylamino group in which the phenyl nucleus may be substituted by a nitro group, amino group, hydroxyl group, alkyl group having 1 or 2 carbon atoms, carboxyl group, sulfonic group or chlorine atom; p is 0 or 1; and q is 0, 1 or 2.

IT **166195-78-4P 166195-79-5P 166195-82-0P**
166281-22-7P
(bis(naphthylazo)stilbene dyes and polarizing films containing them)

RN 166195-78-4 USPATFULL

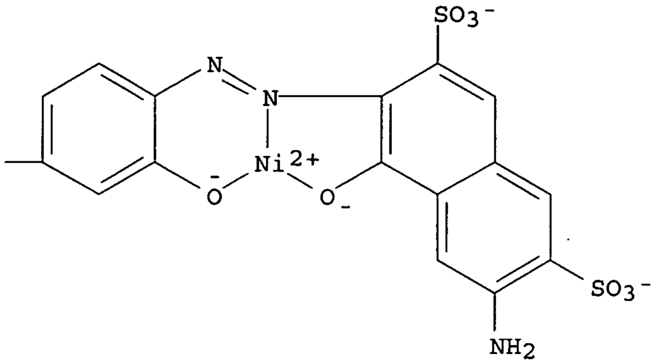
CN Nickelate(4-), [μ-[[3,3'-[1,2-ethenediylbis[(2-hydroxy-4,1-phenylene)azo]]bis[6-amino-4-hydroxy-2,7-naphthalenedisulfonato]](8-)]]di-, tetrahydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



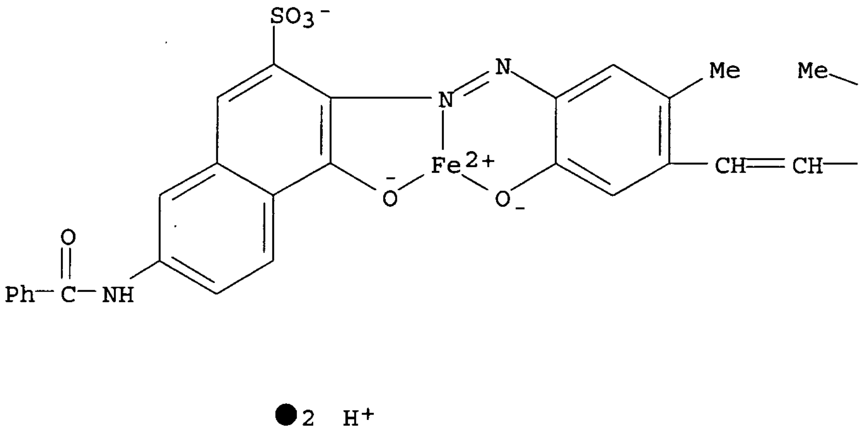
●4 H+

PAGE 1-B

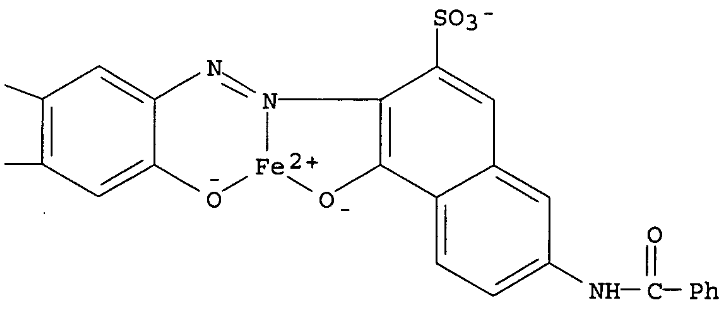


RN 166195-79-5 USPATFULL
CN Ferrate(2-), [μ-[[3,3'-[1,2-ethenediylbis[(2-hydroxy-5-methyl-4,1-phenylene)azo]]bis[7-(benzoylamino)-4-hydroxy-2-naphthalenesulfonato]](6-)]]di-, dihydrogen (9CI) (CA INDEX NAME)

PAGE 1-A

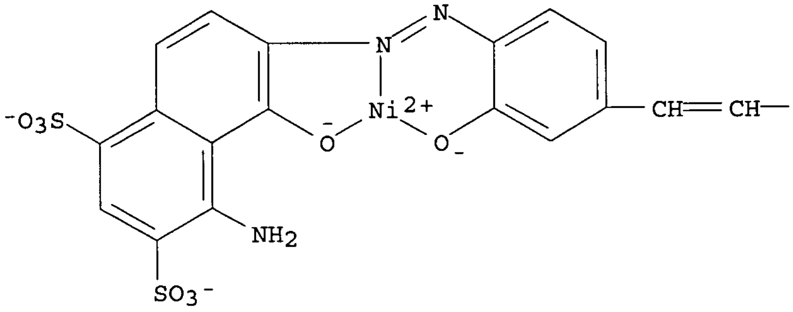


PAGE 1-B



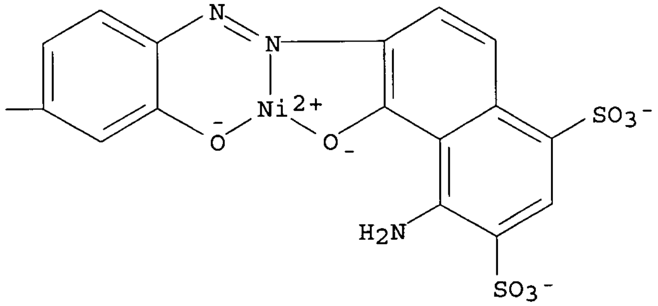
RN 166195-82-0 USPATFULL
CN Nickelate(4-), [μ-[[6,6'-[1,2-ethenediylbis[(2-hydroxy-4,1-phenylene)azo]]bis[4-amino-5-hydroxy-1,3-naphthalenedisulfonato]](8-)]]di-, tetrahydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



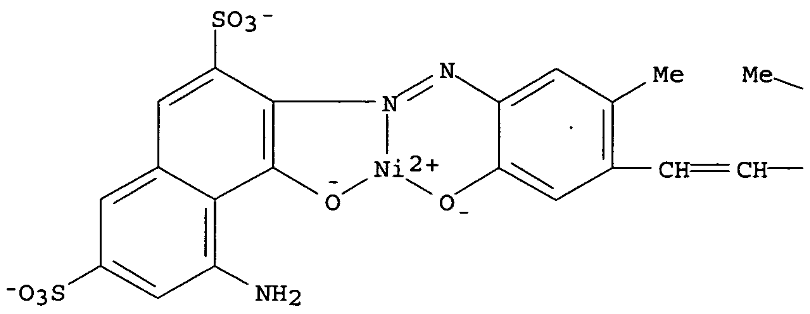
●4 H^+

PAGE 1-B



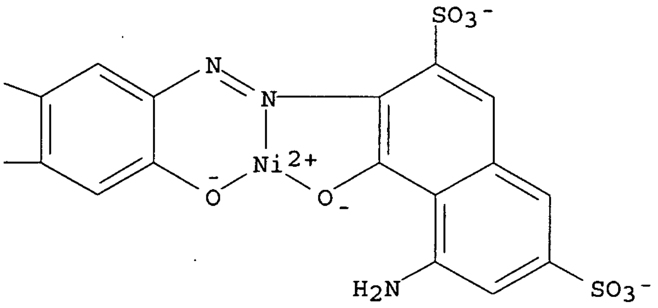
RN 166281-22-7 USPATFULL
CN Nickelate(4-), [μ-[[3,3'-[1,2-ethenediylbis[(2-hydroxy-5-methyl-4,1-phenylene)azo]]bis[5-amino-4-hydroxy-2,7-naphthalenedisulfonato]](6-)]]di-, tetrahydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



● 4 H^+

PAGE 1-B



L84 ANSWER 79 OF 105 USPATFULL on STN
ACCESSION NUMBER: 95:95021 USPATFULL
TITLE: Organic soluble metal-azo and metal-azomethine dyes
INVENTOR(S): Smith, Terrance P., Woodbury, MN, United States
Macomber, David W., St. Paul, MN, United States
PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Company, Saint Paul, MN, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5461155		19951024
APPLICATION INFO.:	US 1995-424228		19950419 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1994-188467, filed on 27 Jan 1994, now abandoned which is a division of Ser. No. US 1992-941741, filed on 8 Sep 1992, now patented, Pat. No. US 5314998
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Berch, Mark L.
LEGAL REPRESENTATIVE: Griswold, Gary L., Kirn, Walter N., Evearitt, Gregory A.

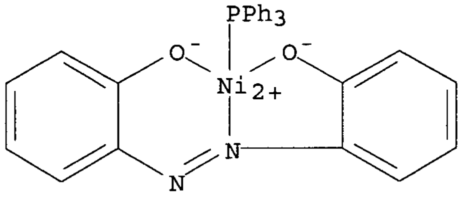
NUMBER OF CLAIMS: 7
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Figure(s); 4 Drawing Page(s)
LINE COUNT: 1627
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Metal-Azomethine dyes with excellent solubility in organic media. The dyes have an arene nucleus and are substituted, in part, with a non-free-radically **polymerizable** alkyldiketonate or 8-hydroxyquinolate ligand. The dyes are useful in dye diffusion transfer processes.

IT **148250-55-9P**
(preparation of, as brown dye for thermal-transfer printing)

RN 148250-55-9 USPATFULL

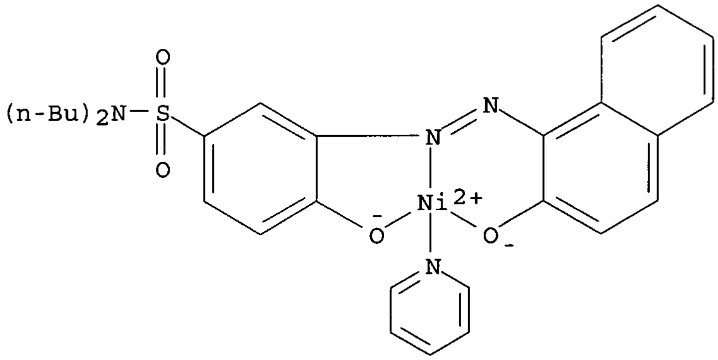
CN Nickel, [[2,2'-azobis[phenolato]](2-)-N,O,O'](triphenylphosphine)- (9CI) (CA INDEX NAME)



IT **158476-26-7P 158476-27-8P 158476-28-9P 158680-57-0P 158680-58-1P 158680-59-2P 158680-60-5P 158680-61-6P**
(preparation of, as dye for thermal-transfer printing)

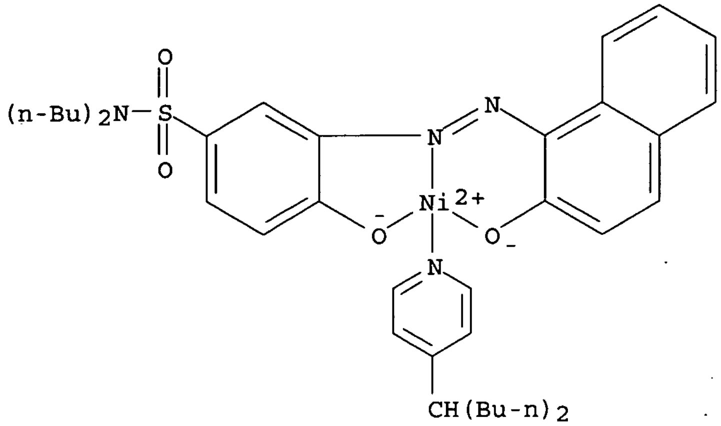
RN 158476-26-7 USPATFULL

CN Nickel, [N,N-dibutyl-4-hydroxy-3-[(2-hydroxy-1-naphthalenyl)azo]benzenesulfonamidato(2-)](pyridine)- (9CI) (CA INDEX NAME)

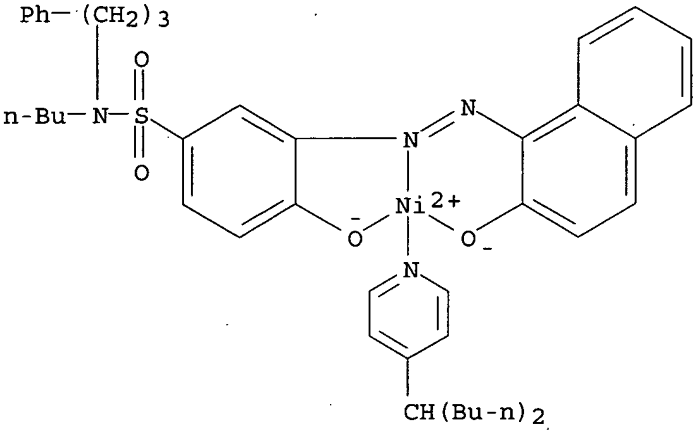


RN 158476-27-8 USPATFULL

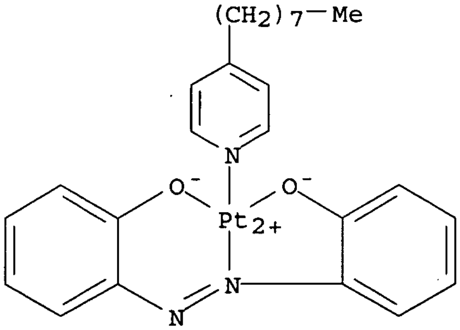
CN Nickel, [4-(1-butylpentyl)pyridine][N,N-dibutyl-4-hydroxy-3-[(2-hydroxy-1-naphthalenyl)azo]benzenesulfonamidato(2-)]- (9CI) (CA INDEX NAME)



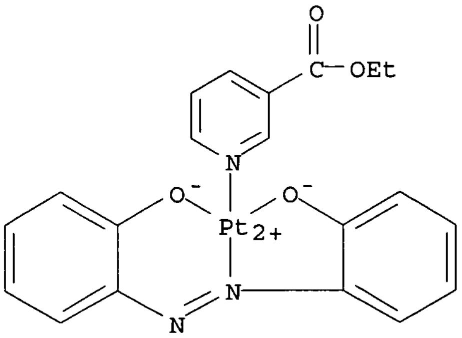
RN 158476-28-9 USPATFULL
CN Nickel, [N-butyl-4-hydroxy-3-[(2-hydroxy-1-naphthalenyl)azo]-N-(3-phenylpropyl)benzenesulfonamidato(2-)][4-(1-butylpentyl)pyridine]- (9CI) (CA INDEX NAME)



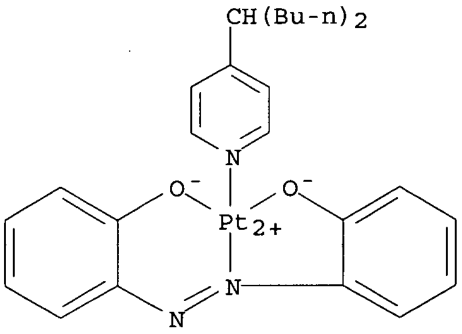
RN 158680-57-0 USPATFULL
CN Platinum, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](4-octylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)



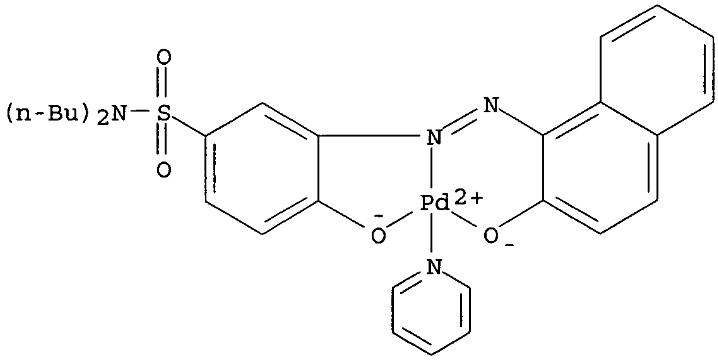
RN 158680-58-1 USPATFULL
CN Platinum, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](ethyl
3-pyridinecarboxylate-κN1)-, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 158680-59-2 USPATFULL
CN Platinum, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)][4-(1-butylpentyl)pyridine]-, (SP-4-2)- (9CI) (CA INDEX NAME)

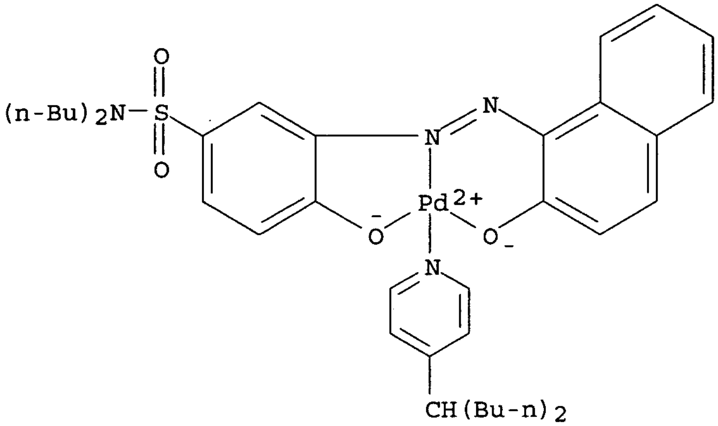


RN 158680-60-5 USPATFULL
CN Palladium, [N,N-dibutyl-4-hydroxy-3-[(2-hydroxy-1-naphthalenyl)azo]benzenesulfonamidato(2-)](pyridine)-, (SP-4-2)- (9CI)
(CA INDEX NAME)



RN 158680-61-6 USPATFULL

CN Palladium, [4-(1-butylpentyl)pyridine][N,N-dibutyl-4-hydroxy-3-[(2-hydroxy-1-naphthalenyl)azo]benzenesulfonamidato]-, (SP-4-2)- (9CI) (CA INDEX NAME)



L84 ANSWER 80 OF 105 USPATFULL on STN

ACCESSION NUMBER: 95:71224 USPATFULL

TITLE: Toner for developing electrostatic image, image forming apparatus and process cartridge

INVENTOR(S):
Taya, Masaaki, Kawasaki, Japan
Kohtaki, Takaaki, Yokohama, Japan
Unno, Makoto, Tokyo, Japan
Doujo, Tadashi, Ebina, Japan

PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Tokyo, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5439770		19950808	
APPLICATION INFO.:	US 1994-228269		19940415	(8)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1993-93181	19930420

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Martin, Roland
LEGAL REPRESENTATIVE: Fitzpatrick, Cella, Harper & Scinto
NUMBER OF CLAIMS: 24
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 1862
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A toner for developing an electrostatic image is constituted by at least a binder resin and a charge control agent. The binder resin has an acid value of 5-50. The charge control agent comprises an iron complex represented by the following formula: ##STR1## wherein X.sub.1 and X.sub.2 independently denote hydrogen atom, lower alkyl group, lower alkoxy group, nitro group or halogen atom; m and m' denote an integer of 1-3; R.sub.1 and R.sub.3 independently denote hydrogen atom, C.sub.1-18 alkyl or alkenyl, sufonamide, mesyl, sulfonic acid group, carboxy ester group, hydroxy, C.sub.1-18 alkoxy, acetylamino, benzoylamino or halogen

atom; n and n' denote an integer of 1-3; R.sub.2 and R.sub.4 denote hydrogen atom or nitro group; and A.sup.+ denotes hydrogen ion, sodium ion, potassium ion or ammonium ion. The toner has a weight-average particle size (D.sub.4) of 4-9 μm and including toner particles having a particle size of 5 μm or smaller at 3-90% by number, toner particles having a particle size of 6.35-10.08 μm at 1-80% by number and toner particles having a particle size of 12.7 μm or larger at a percentage by volume of at most 2.0%, wherein the toner particles having a particle size of 5.0 μm or smaller are contained at N % by number and at V % by volume satisfying a relationship:

N/V=-0.05N+k,

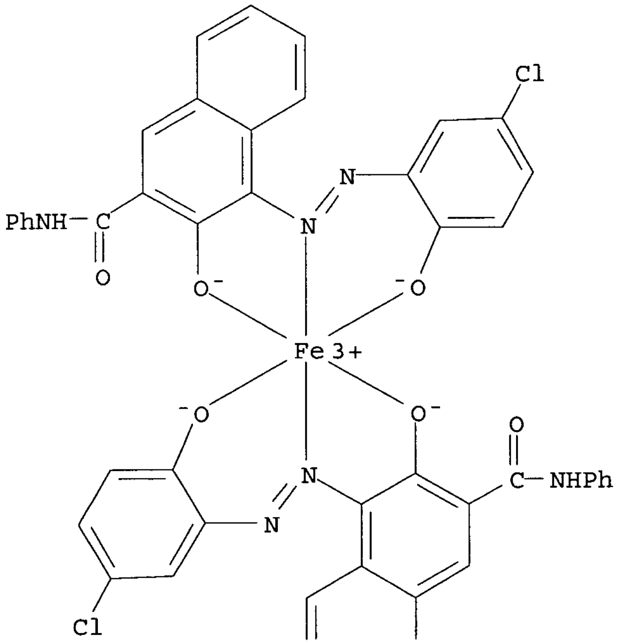
wherein k is a positive number in the range of 3.0-7.5.

IT **104815-18-1 163756-19-2 163756-22-7**
163799-98-2
(charge control agent for electrophotog. toner)

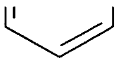
RN 104815-18-1 USPATFULL

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

PAGE 1-A



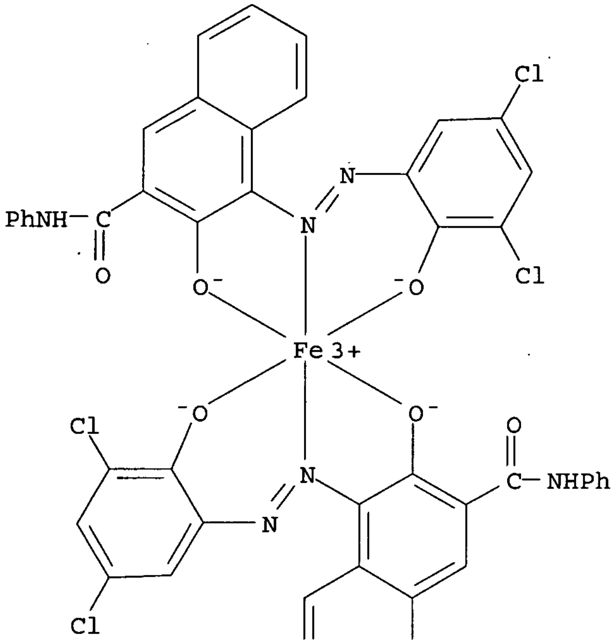
PAGE 2-A



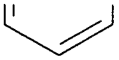
● NH_4^+

RN 163756-19-2 USPATFULL
CN Ferrate(1-), bis[4-[[3,5-dichloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

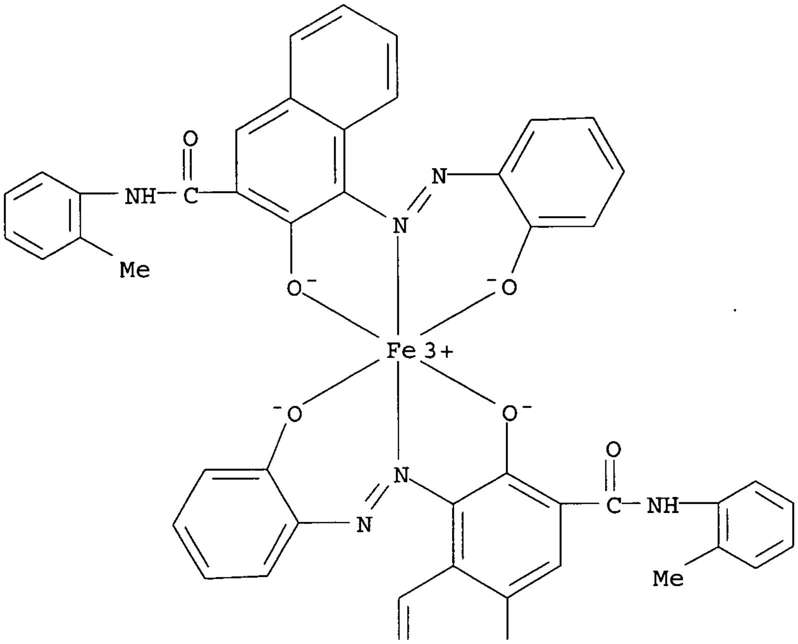


● H^+

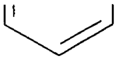
RN 163756-22-7 USPATFULL
CN Ferrate(1-), bis[3-(hydroxy-κO)-4-[[2-(hydroxy-κO)phenyl]azo-κN1]-N-(2-methylphenyl)-2-naphthalenecarboxamidato(2-)]-, ammonium

(9CI) (CA INDEX NAME)

PAGE 1-A



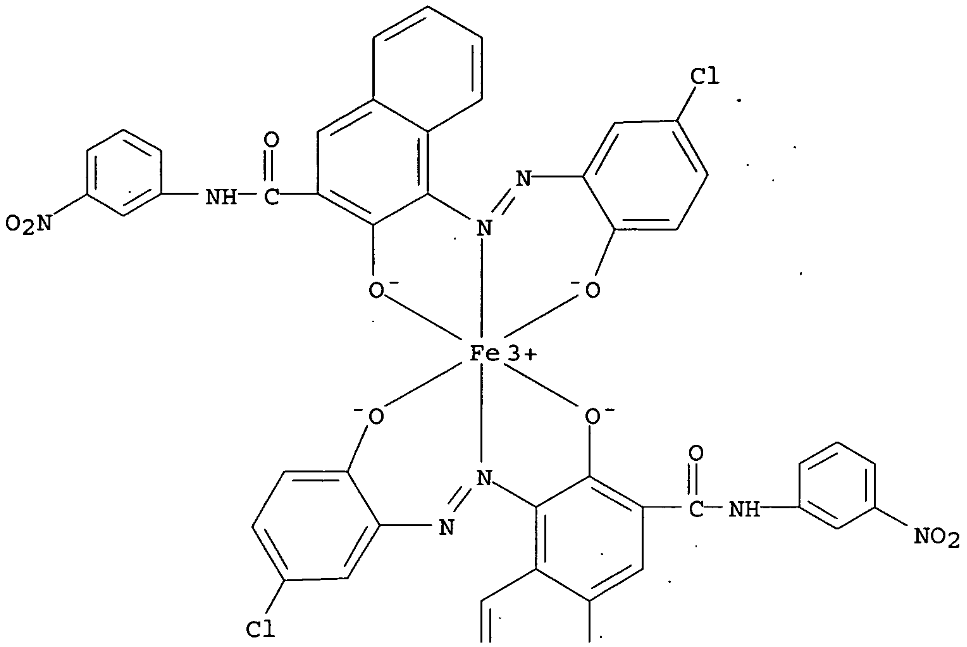
PAGE 2-A



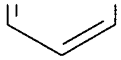
● NH_4^+

RN 163799-98-2 USPATFULL
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-
(hydroxy-κO)-N-(3-nitrophenyl)-2-naphthalenecarboxamidato(2-)]-,
sodium (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



● Na^+

```
L84  ANSWER 81 OF 105  USPATFULL on STN
ACCESSION NUMBER:        94:70922  USPATFULL
TITLE:                   Toner for developing electrostatic image and process
                         for production thereof
INVENTOR(S):             Tsuchiya, Kiyoko, Yokosuka, Japan
                         Tomiyama, Koichi, Kawasaki, Japan
                         Kato, Masayoshi, Iruma, Japan
                         Kukimoto, Tsutomu, Yokohama, Japan
                         Yusa, Hiroshi, Yokohama, Japan
PATENT ASSIGNEE(S):      Canon Kabushiki Kaisha, Tokyo, Japan (non-U.S.
                         corporation)

                              NUMBER        KIND     DATE
                         ---------------- ------ --------
PATENT INFORMATION:      US 5338638              19940816
APPLICATION INFO.:       US 1991-797992          19911126  (7)

                                NUMBER        DATE
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PRIORITY INFORMATION:     JP 1990-332693     19901129
DOCUMENT TYPE:            Utility
FILE SEGMENT:             Granted
PRIMARY EXAMINER:         Goodrow, John
LEGAL REPRESENTATIVE:     Fitzpatrick, Cella, Harper & Scinto
NUMBER OF CLAIMS:         49
EXEMPLARY CLAIM:          1
NUMBER OF DRAWINGS:       3 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT:               1743
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB      A toner for developing an electrostatic image is provided as a
        pulverized mixture including a binder resin and a colorant. The binder
        resin is characterized by a molecular weight distribution on a GPC
        chromatogram of its tetrahydrofuran (THF)-soluble resin content
        including at least 15% and below 35% of a resin component in a molecular
        weight region of at most 5000 and at least 3 weight % of a resin component
        in a molecular weight region of at least 5+10.sup.6 and showing a
        main peak in a molecular weight region of 5000 to 10.sup.5. The binder
        resin also has an acid value of 2-100 mg KOH/g. The THF-soluble resin
        component in the molecular weight region of at least 5+10.sup.6 is
        enriched during a melt-kneading step during the toner production.
IT   143977-17-7
          (electrostatog. toners containing)
RN   143977-17-7  USPATFULL
CN   Ferrate(1-), bis[2-[[2-(mercapto-κS)phenyl]azo-κN1]phenolato(2-
       )-κO]-, hydrogen, compd.with N-butyl-1-butanamine (1:1) (9CI)  (CA
       INDEX NAME)

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     CRN  143977-16-6
     CMF  C24 H16 Fe N4 O2 S2 . H
     CCI  CCS
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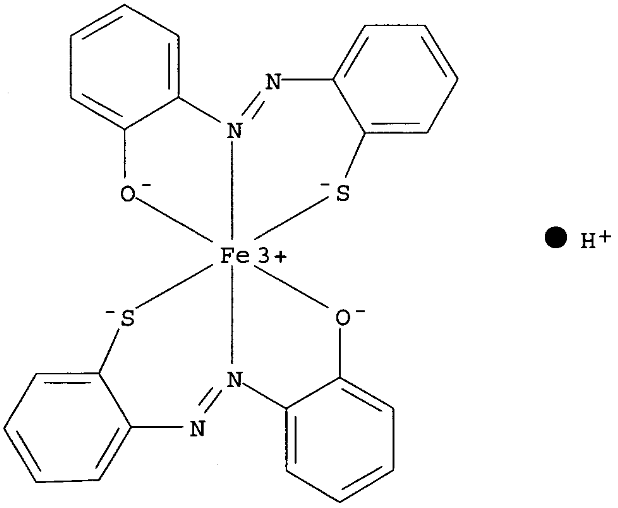

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     CM   2

     CRN  111-92-2
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CMF C8 H19 N

n-Bu—NH—Bu-n

```
L84  ANSWER 82 OF 105  USPATFULL on STN
ACCESSION NUMBER:       94:44739  USPATFULL
TITLE:                  Organic solvent-soluble metal-azo and metal-azomethine
                        dyes
INVENTOR(S):            Smith, Terrance P., Woodbury, MN, United States
                        Macomber, David W., St. Paul, MN, United States
PATENT ASSIGNEE(S):     Minnesota Mining and Manufacturing Company, St. Paul,
                        MN, United States (U.S. corporation)

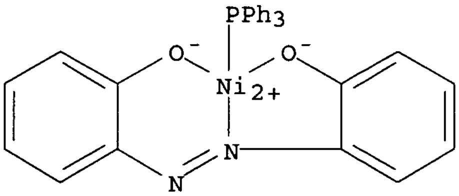
                             NUMBER        KIND    DATE
                        ---------------- ------ --------
PATENT INFORMATION:     US 5314998              19940524
APPLICATION INFO.:      US 1992-941741          19920908 (7)
DOCUMENT TYPE:          Utility
FILE SEGMENT:           Granted
PRIMARY EXAMINER:       Lee, Mary C.
ASSISTANT EXAMINER:     Powers, Fiona T.
LEGAL REPRESENTATIVE:   Griswold, Gary L., Kirn, Walter N., Evearitt, Gregory
                        A.
NUMBER OF CLAIMS:       11
EXEMPLARY CLAIM:        1
NUMBER OF DRAWINGS:     6 Drawing Figure(s); 4 Drawing Page(s)
LINE COUNT:             1571
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
```

AB Metal-azo dyes with excellent solubility in organic media are provided. The metal-containing dyes of the present invention have a nucleus of the formula: ##STR1## wherein the substituents have the meaning given in the description. Dye-donor sheets comprising the above-mentioned dyes are also disclosed.

IT **148250-55-9P**
(preparation of, as brown dye for thermal-transfer printing)

RN 148250-55-9 USPATFULL

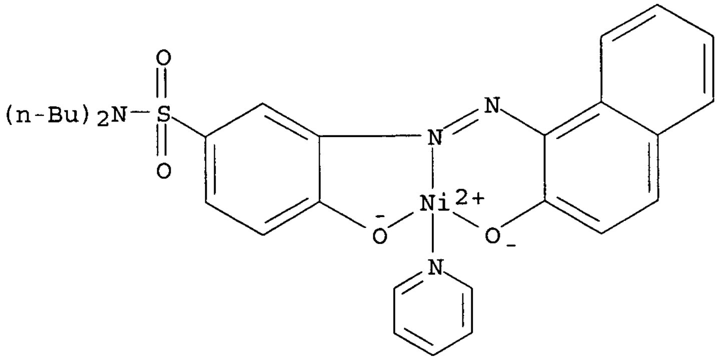
CN Nickel, [[2,2'-azobis[phenolato]](2-)-N,O,O'](triphenylphosphine)- (9CI) (CA INDEX NAME)



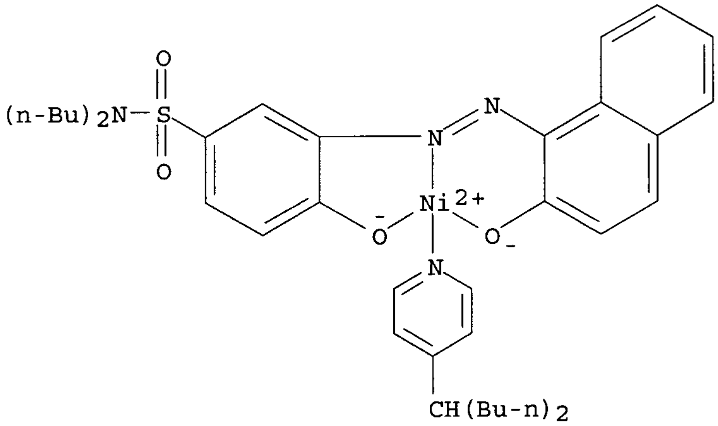
IT **158476-26-7P 158476-27-8P 158476-28-9P**
158680-57-0P 158680-58-1P 158680-59-2P
158680-60-5P 158680-61-6P
(preparation of, as dye for thermal-transfer printing)

RN 158476-26-7 USPATFULL

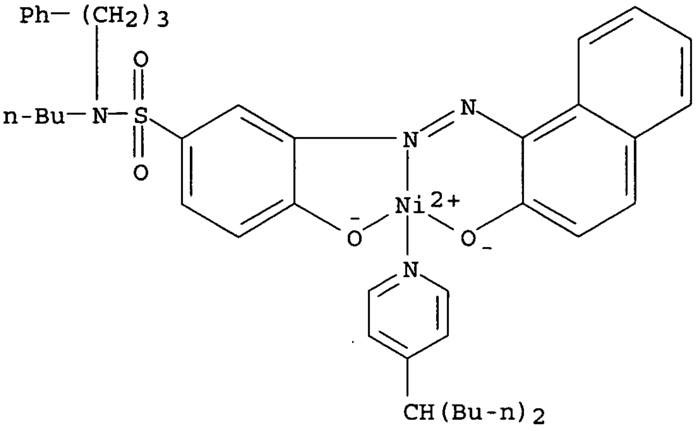
CN Nickel, [N,N-dibutyl-4-hydroxy-3-[(2-hydroxy-1-naphthalenyl)azo]benzenesulfonamidato(2-)](pyridine)- (9CI) (CA INDEX NAME)



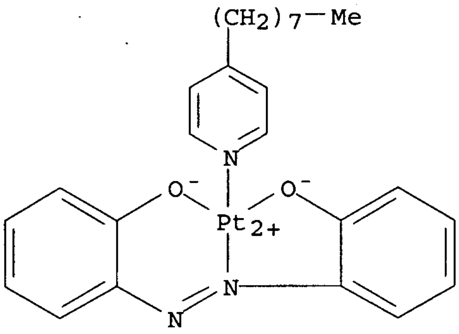
RN 158476-27-8 USPATFULL
CN Nickel, [4-(1-butylpentyl)pyridine][N,N-dibutyl-4-hydroxy-3-[(2-hydroxy-1-naphthalenyl)azo]benzenesulfonamidato(2-)]- (9CI) (CA INDEX NAME)



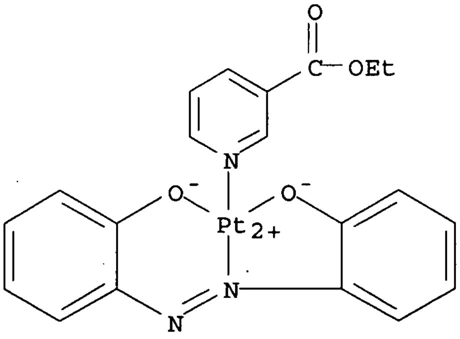
RN 158476-28-9 USPATFULL
CN Nickel, [N-butyl-4-hydroxy-3-[(2-hydroxy-1-naphthalenyl)azo]-N-(3-phenylpropyl)benzenesulfonamidato(2-)][4-(1-butylpentyl)pyridine]- (9CI) (CA INDEX NAME)



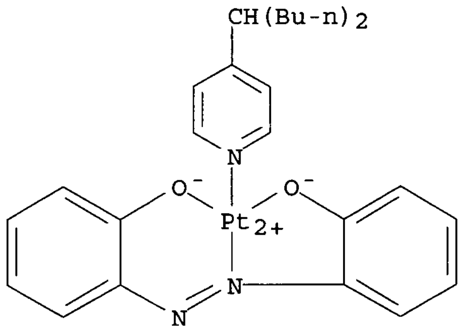
RN 158680-57-0 USPATFULL
CN Platinum, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](4-octylpyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)



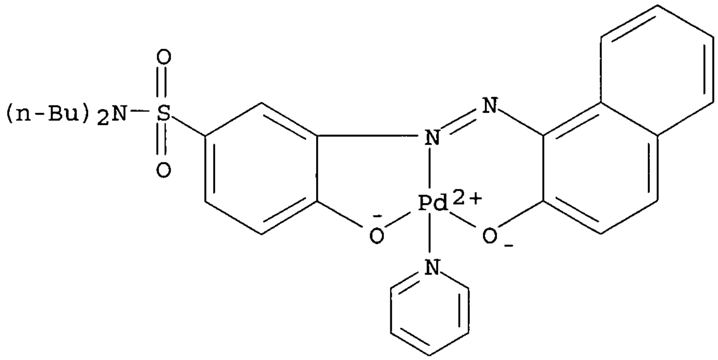
RN 158680-58-1 USPATFULL
CN Platinum, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](ethyl 3-pyridinecarboxylate-κN1)-, (SP-4-2)- (9CI) (CA INDEX NAME)



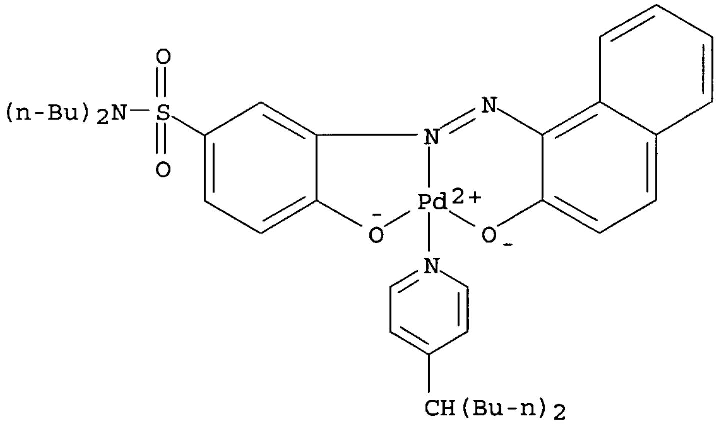
RN 158680-59-2 USPATFULL
CN Platinum, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)][4-(1-butylpentyl)pyridine]-, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 158680-60-5 USPATFULL
CN Palladium, [N,N-dibutyl-4-hydroxy-3-[(2-hydroxy-1-naphthalenyl)azo]benzenesulfonamidato(2-)](pyridine)-, (SP-4-2)- (9CI) (CA INDEX NAME)



RN 158680-61-6 USPATFULL
CN Palladium, [4-(1-butylpentyl)pyridine][N,N-dibutyl-4-hydroxy-3-[(2-hydroxy-1-naphthalenyl)azo]benzenesulfonamidato]-, (SP-4-2)- (9CI) (CA INDEX NAME)



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L84  ANSWER 83 OF 105  USPATFULL on STN
ACCESSION NUMBER:      86:38252  USPATFULL
TITLE:                 Photographic products employing novel nondiffusible
                       metal complexes of azo dyes
INVENTOR(S):           Reczek, James A., Rochester, NY, United States
PATENT ASSIGNEE(S):    Eastman Kodak Company, Rochester, NY, United States
                       (U.S. corporation)

                           NUMBER        KIND    DATE
                       --------------- ------ --------
PATENT INFORMATION:    US 4598030             19860701
APPLICATION INFO.:     US 1985-761932         19850802  (6)
RELATED APPLN. INFO.:  Division of Ser. No. US 1985-688203, filed on 2 Jan
                       1985, now patented, Pat. No. US 4562139
DOCUMENT TYPE:         Utility
FILE SEGMENT:          Granted
PRIMARY EXAMINER:      Schilling, Richard L.
LEGAL REPRESENTATIVE:  Cole, Harold E.
NUMBER OF CLAIMS:      17
EXEMPLARY CLAIM:       12
LINE COUNT:            984
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB       Photographic elements, diffusion transfer assemblages and coordination
         complexes are described which employ a novel nondiffusible compound
         capable of releasing at least one diffusible dye moiety having the
         formula: ##STR1## wherein: (a) D.sup.1, D.sup.2 and D.sup.3 each
         independently represents the atoms necessary to complete an aromatic
         heterocyclic nucleus having at least one ring of 5 to 7 atoms;

         (b) Z.sup.1 and Z.sup.2 each independently represents the atoms
         necessary to complete an aromatic carbocyclic or heterocyclic nucleus
         having at least one ring of 5 to 7 atoms or a ketomethine group;

         (c) G.sup.1 and G.sup.2 each independently represents a metal chelating
         group;

         (d) Me is a polyvalent, hexacoordinate metal ion,

         (e) CAR represents a ballasted carrier moiety capable of releasing the
         diffusible dye moiety as a function of development of the silver halide
         emulsion layer under alkaline conditions; and

         (f) n is 1, 2 or 3.
IT   101897-42-1P
       (preparation and photog. redox dye releaser applications of)
RN   101897-42-1  USPATFULL
CN   Nickel, [3-hydroxy-4-[(1-hydroxy-4-methyl-2-naphthalenyl)azo]benzenesulfon
         amidato(2-)](2,2':6',2''-terpyridine-N,N',N'')-, (OC-6-24)- (9CI)  (CA
         INDEX NAME)
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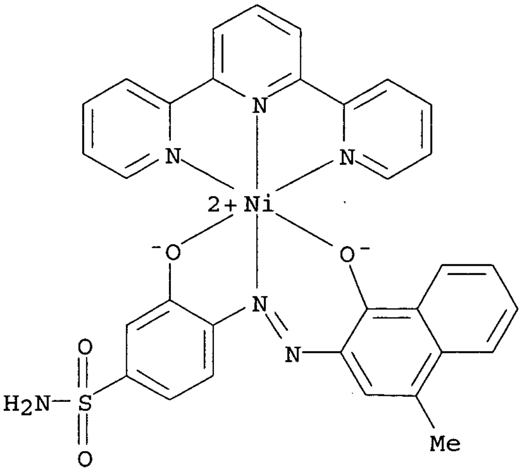

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IT  101897-34-1P
        (preparation and reaction of, with terpyridine)
RN   101897-34-1  USPATFULL
CN   Nickelate(2-), bis(acetato-O)[3-hydroxy-4-[(1-hydroxy-4-methyl-2-
       naphthalenyl)azo]benzenesulfonamidato(2-)]-, dihydrogen (9CI)  (CA INDEX
       NAME)
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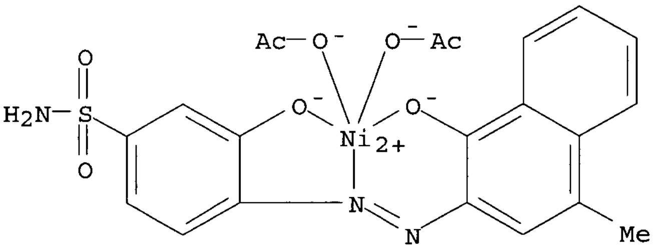

● 2 H$^+$

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L84  ANSWER 84 OF 105  USPATFULL on STN
ACCESSION NUMBER:       85:76812  USPATFULL
TITLE:                  Photographic products employing novel nondiffusible
                        metal complexes of azo dyes
INVENTOR(S):            Reczek, James A., Rochester, NY, United States
PATENT ASSIGNEE(S):     Eastman Kodak Company, Rochester, NY, United States
                        (U.S. corporation)

                            NUMBER        KIND    DATE
                        ---------------- ------ --------
PATENT INFORMATION:     US 4562139              19851231
APPLICATION INFO.:      US 1985-688203          19850102  (6)
DOCUMENT TYPE:          Utility
FILE SEGMENT:           Granted
PRIMARY EXAMINER:       Schilling, Richard L
LEGAL REPRESENTATIVE:   Cole, Harold E.
```

NUMBER OF CLAIMS: 23
EXEMPLARY CLAIM: 12
LINE COUNT: 1054
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Photographic elements, diffusion transfer assemblages and coordination complexes are described which employ a novel nondiffusible compound capable of releasing at least one diffusible dye moiety having the formula: ##STR1## wherein: (a) D.sup.1, D.sup.2 and D.sup.3 each independently represents the atoms necessary to complete an aromatic heterocyclic nucleus having at least one ring of 5 to 7 atoms;

(b) Z.sup.1 and Z.sup.2 each independently represents the atoms necessary to complete an aromatic carbocyclic or heterocyclic nucleus having at least one ring of 5 to 7 atoms or a ketomethine group;

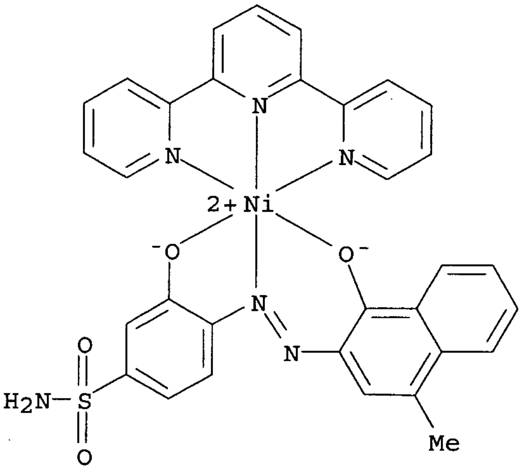
(c) G.sup.1 and G.sup.2 each independently represents a metal chelating group;

(d) Me is a polyvalent, hexacoordinate metal ion,

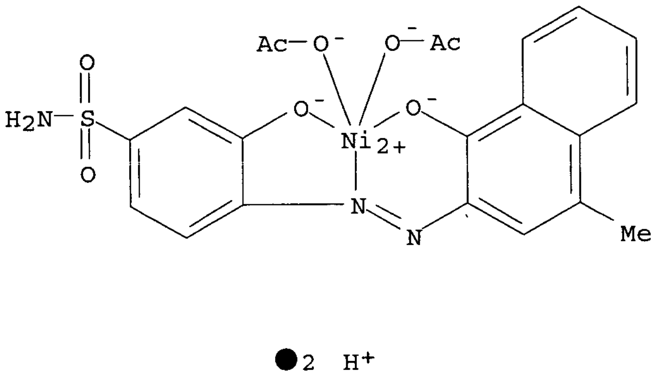
(e) CAR represents a ballasted carrier moiety capable of releasing the diffusible dye moiety as a function of development of the silver halide emulsion layer under alkaline conditions; and

(f) n is 1, 2 or 3.

IT **101897-42-1P**
(preparation and photog. redox dye releaser applications of)
RN 101897-42-1 USPATFULL
CN Nickel, [3-hydroxy-4-[(1-hydroxy-4-methyl-2-naphthalenyl)azo]benzenesulfonamidato(2-)](2,2':6',2''-terpyridine-N,N',N'')-, (OC-6-24)- (9CI) (CA INDEX NAME)



IT **101897-34-1P**
(preparation and reaction of, with terpyridine)
RN 101897-34-1 USPATFULL
CN Nickelate(2-), bis(acetato-O)[3-hydroxy-4-[(1-hydroxy-4-methyl-2-naphthalenyl)azo]benzenesulfonamidato(2-)]-, dihydrogen (9CI) (CA INDEX NAME)



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SCISEARCH, WPIX' - CONTINUE? (Y)/N:y


'HITIND' IS NOT A VALID FORMAT
In a multifile environment, a format can only be used if it is valid
in at least one of the files.  Refer to file specific help messages
or the STNGUIDE file for information on formats available in
individual files.
REENTER DISPLAY FORMAT FOR ALL FILES (FILEDEFAULT):ibib ed ab

L84   ANSWER 85 OF 105  PASCAL  COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED.
      on STN
ACCESSION NUMBER:         2001-0423721   PASCAL
COPYRIGHT NOTICE:         Copyright .COPYRGT. 2001 INIST-CNRS. All rights
                          reserved.
TITLE (IN ENGLISH):       Preparation and characterization of a new conducting
                          polymer from o-aminoazotoluene azo dye
AUTHOR:                   REHAN Hyman H.
CORPORATE SOURCE:         Chemistry Department, Faculty of Science, Cairo
                          University, Giza, Egypt
SOURCE:                   Materialwissenschaft und Werkstofftechnik, (2001),
                          32(3), 266-271, 47 refs.
                          ISSN: 0933-5137
DOCUMENT TYPE:            Journal
BIBLIOGRAPHIC LEVEL:      Analytic
COUNTRY:                  Germany, Federal Republic of
LANGUAGE:                 English
SUMMARY LANGUAGE:         German
AVAILABILITY:             INIST-15546, 354000097570980070
UP    20011030
AB    Anodic polymerization of o-aminoazotoluene azo dye on
      platinum electrodes in 0.5 M HCl in 50% v/v ethanol/water and in
      MeCN was studied by cyclic voltammetry. The formed films, in both media,
      were electroactive in acidic solutions but electroinactive in neutral and
      alkaline solutions and aprotic MeCN. The pair of redox peaks due to the
      electroactivity is attributed to a 1:1 proton + electron elimination (on
      oxidation)/addition (on reduction) at the aminolimino linkages which
      connect the aromatic nuclei. Chrono-coulometry showed that the kinetics
      of these processes were dominated by the transport of solvated protons
      and Cl.sup.- ions through the polymer films. Reduction of the polymer
      films in acid solutions led to their gradual degradation due to the
```

irreversible reduction of the azo groups in the polymer skeleton, while the reversible reduction of these groups in MeCN saved the polymer from degradation. The rate of electron transfer reactions of the redox couple [Fe(CN).sub.6].sup.3.sup.-.sup./.sup.4on polymer-covered platinum electrodes decreased substantially with increasing the polymer film thickness.

L84 ANSWER 86 OF 105 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 2000-0455829 PASCAL
COPYRIGHT NOTICE: Copyright .COPYRGT. 2000 INIST-CNRS. All rights reserved.
TITLE (IN ENGLISH): Electrosynthesis of conducting polymer films from the azo dye methoxy red
AUTHOR: REHAN H. H.
CORPORATE SOURCE: Chemistry Department, College of Education for Girls, PO Box 27104, Malaz, Riyadh 11417, Saudi Arabia
SOURCE: Journal of applied electrochemistry, (2000), 30(8), 945-951, 35 refs.
ISSN: 0021-891X CODEN: JAELBJ
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: United Kingdom
LANGUAGE: English
AVAILABILITY: INIST-15602, 354000090668540070
UP 20001123

AB Anodic **polymerization** of the azo dye methoxy red (4-methoxybenzene **azo**-1,3-diaminobenzene) on **platinum** electrodes in 1 M HCl in 50% V/V ethanol/water was found to yield thin and stable polymeric films. The films were electroactive in acidic solutions and the activity diminished as the acidity decreased. The pair of symmetrical redox peaks at a formal redox potential, (E°).sub.p.sub.H.sub.=.sub.0 = 0.61 V vs SCE, with a Nernstian slope dE/dpH = 0.06 V, is attributed to a 1:1 proton + electron elimination (on oxidation)/addition (on reduction) at the amino/imino linkages which connect the aromatic nuclei. Chronocoulometric plots indicated that the transport of the solvated protons, and probably Cl.sup.- ions, through the film is the rate-determining step of the above redox processes. The rate of electron transfer reactions of the redox couple [Fe(CN).sub.6].sup.3.sup.- .sup.4.sup.- on poly-methoxy red-covered platinum electrodes decreased by a factor of more than two orders of magnitude, compared to the bare electrodes.

L84 ANSWER 87 OF 105 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 1994-0373616 PASCAL
COPYRIGHT NOTICE: Copyright .COPYRGT. 1994 INIST-CNRS. All rights reserved.
TITLE (IN ENGLISH): Azo polymers for reversible optical storage. IV: Cooperative motion of rigid groups in semicrystalline polymers
AUTHOR: NATANSOHN A.; ROCHON P.; PEZOLET M.; AUDET P.; BROWN D.; TO S.
CORPORATE SOURCE: Queen's univ., dep. chemistry, Kingston ON K7L 3N6, Canada
SOURCE: Macromolecules, (1994), 27(9), 2580-2585
ISSN: 0024-9297 CODEN: MAMOBX
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: United States

```
LANGUAGE:               English
NOTE:                   1/4 p. ref. et notes
AVAILABILITY:           INIST-13789, 354000045424790290
UP    20001027
AB    Polarized light induces a preferred orientation of azobenzene groups
      through photochemical trans-cis-trans processes. Stronger orientation
      tendencies exist if the azo-contining polymers are crystalline or liquid
      crystalline and the cooperative reorientation of nonactive mesogens of
      similar shape has been demonstrated. It is shown that cooperative
      reorientation is a more general phenomenon and can take place even for a
      nonactive rigid group of a different shape which is bonded in the main
      chain while the azobenzene groups are in the side chains. Comparison is
      made between a disperse red 1-containing amorphous azo polymer
      (pDR1A) and a disperse red 19-containing semicrystalline azo
      polymer (pDR19T) with phenylene diacrylate (PD) groups
      within the main chain

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      on STN
ACCESSION NUMBER:       1994-0217486   PASCAL
COPYRIGHT NOTICE:       Copyright .COPYRGT. 1994 INIST-CNRS. All rights
                        reserved.
TITLE (IN ENGLISH):     The heat of oxidation of 1,2-di-n-butylhydrazine to
                        azo-n-butane
AUTHOR:                 ENGEL P. S.; OWENS W. H.; CHENGRONG WANG
CORPORATE SOURCE:       Rice univ., dep. chemistry, Houston TX 77251, United
                        States
SOURCE:                 Journal of physical chemistry : (1952), (1993),
                        97(40), 10486-10488
                        ISSN: 0022-3654  CODEN: JPCHAX
DOCUMENT TYPE:          Journal
BIBLIOGRAPHIC LEVEL:    Analytic
COUNTRY:                United States
LANGUAGE:               English
NOTE:                   1/4 p. ref. et notes
AVAILABILITY:           INIST-549, 354000048129550360
UP    20001027
AB    1,2-Di-n-butylhydrazine in hexane solution has been oxidized to
      azo-n-butane with oxygen and Pd/C catalyst
      and with red mercuric oxide. Both methods led to the same calculated heat
      of hydrogenation (ΔH.sub.H) of the azo group in hexane,
      -16.4±0.3 kcal/mol. This value is 10.6 kcal/mol less exothermic than
      the ΔH.sub.H of carbon-carbon double bonds

L84   ANSWER 89 OF 105  PASCAL  COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED.
      on STN
ACCESSION NUMBER:       1990-0247941   PASCAL
TITLE (IN ENGLISH):     Reactions of azo and azoxy sulphones with
                        transition metal complexes. VII:
                        Arylation of olefins with arylazoxy aryl sulphones
                        catalysed by a palladium(0) phosphine complex
AUTHOR:                 KAMIGATA N.; FUKUSHIMA T.; SATOH A.; KAMEYAMA M.
CORPORATE SOURCE:       Tokyo metropolitan univ., fac. sci., dep. chemistry,
                        Setagaya-ku Tokyo 158, Japan
SOURCE:                 Perkin transactions. 1, (1990)(3), 549-553, 29 refs.
                        ISSN: 0300-922X  CODEN: JCPRB4
DOCUMENT TYPE:          Journal
BIBLIOGRAPHIC LEVEL:    Analytic
COUNTRY:                United Kingdom
LANGUAGE:               English
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AVAILABILITY: INIST-130C, 354000004526160170
UP 20001027
AB The arylation of acyclic and cyclic olefins by arylazoxy aryl sulphones has been investigated in the presence of a palladium(0) catalyst in benzene

L84 ANSWER 90 OF 105 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 1982-0232907 PASCAL
TITLE (IN ENGLISH): Effect of polyelectrolytes on the rate of ligand-metal-ion reactions. I: '**Catalysis**' of the complexation of **nickel**(II) with an **azo**-dye
AUTHOR: TONDRE C.
CORPORATE SOURCE: Univ. Nancy I, ERA CNRS, Vandoeuvre-Les-Nancy 54506, France
SOURCE: CS Faraday trans. I, (1982), 78(6), 1795-1808, 39 refs.
ISSN: 0300-9599
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: United Kingdom
LANGUAGE: English
AVAILABILITY: CNRS-594A
UP 20030206

L84 ANSWER 91 OF 105 JICST-EPlus COPYRIGHT 2005 JST on STN
ACCESSION NUMBER: 1000025118 JICST-EPlus
TITLE: Kinetics of Micellar Catalyzed Reaction for Pyridine-2-azo-p-dimethylaniline-Ni2+ and Ferrocene-Fe3+ Systems.
AUTHOR: AKAZAWA TOMOAKI; SASAKI MUNEO; IKEDA YOSHIYUKI
CORPORATE SOURCE: Konan Univ., Fac. of Sci.
SOURCE: Nippon Kagakkai Koen Yokoshu, (1999) vol. 76th, no. 1, pp. 209. Journal Code: S0493A
ISSN: 0285-7626
PUB. COUNTRY: Japan
LANGUAGE: Japanese
STATUS: New
AB Recently, the effect of microenvironment with the micelle was studied by many chemists. It was found that electrostatic and hydrophobic interaction between reacting system and micellar phase influences remarkably reactivity. We have studied micellar catalytic kinetics when the reacting species are little subjected to the charge separation on activation. In anionic micellar solution the micellar **catalysis** was investigated for complexation reaction of pyridine-2-**azo** -p-dimethyl aniline **Ni**(SUP)2+(/SUP), and in cationic micellar solution it was investigated for electron transfer reaction of ferrocene-Fe(SUP)3+(/SUP). With their kinetic investigation, their distribution constants between water and micellar phases were estimated by establishing suitable distribution models, and their activation parameters were discussed with reference to the effect of reaction field. (author abst.)

L84 ANSWER 92 OF 105 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 2004:207354 SCISEARCH
THE GENUINE ARTICLE: 776EB
TITLE: Use of an o-aminobenzoic acid-functionalized XAD-4 copolymer resin for the separation and preconcentration of

heavy metal(II) ions
AUTHOR: Cekic S D; Filik H; Apak R (Reprint)
CORPORATE SOURCE: Istanbul Univ, Dept Chem, Fac Engn, TR-34850 Istanbul, Turkey (Reprint)
COUNTRY OF AUTHOR: Turkey
SOURCE: ANALYTICA CHIMICA ACTA, (3 MAR 2004) Vol. 505, No. 1, pp. 15-24.
ISSN: 0003-2670.
PUBLISHER: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 18
ENTRY DATE: Entered STN: 12 Mar 2004
Last Updated on STN: 12 Mar 2004
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
ED Entered STN: 12 Mar 2004
Last Updated on STN: 12 Mar 2004

AB XAD copolymer resins maybe functionalized with heavy metal ion-selective ligands either by covalent linkage to the polymer backbone orby impregnation. These resins may be tailored to be specific for certain heavy metals by adjusting the adsorption and elution parameters, thereby enabling simple and cost-effective spectrophotometric and flame atomic absorption spectrometry (FAAS) determinations of these metals without requiring the more sophisticated coupled instrumental techniques. For the synthesis of o-aminobenzoic acid (ABA)-immobilized XAD-4 **copolymer** resin that is expected to preconcentrate a number of **transition** and heavy **metals**, the **azo**-linkage method was chosen. For this purpose the copolymer was nitrated, reduced to the corresponding amine, converted to the diazonium salt with nitrite, and reacted with o-aminobenzoic acid to produce the XAD-ABA sorbent. This sorbent was capable of preconcentrating Pb(II), Cd(II), Ni(II), Co(II) and Zn(II) from weakly acidic or neutral aqueous solution. The retained metals were eluted with 1.0 M HNO3 from the resin column, and were subsequently determinated with by flame atomic absorption spectrometry. The developed resin preconcentration and determination method was successfully applied to the analysis of a synthetic metal mixture solution, a certified reference material (CRM) of coal sample, and brackish lake water. (C) 2003 Elsevier Science B.V. All rights reserved.

L84 ANSWER 93 OF 105 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on STN
ACCESSION NUMBER: 1993:562049 SCISEARCH
THE GENUINE ARTICLE: LW799
TITLE: SYNTHESIS OF ARYLAZOSTILBENES AND ARYLAZOSTOLANES BY THE HECK REACTION
AUTHOR: JEOUNG C B (Reprint); HAAK O; GRAHN W; BOLDT P
CORPORATE SOURCE: TECH UNIV CAROLO WILHELMINA BRAUNSCHWEIG, INST ORGAN CHEM, HAGENRING 30, D-38092 BRAUNSCHWEIG, GERMANY
COUNTRY OF AUTHOR: GERMANY
SOURCE: JOURNAL FUR PRAKTISCHE CHEMIE-CHEMIKER-ZEITUNG, (1993) Vol. 335, No. 6, pp. 521-531.
ISSN: 0941-1216.
PUBLISHER: JOHANN AMBROSIUS BARTH VERLAG, IM WEIHER 10, D-69121 HEIDELBERG, GERMANY.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: PHYS; ENGI
LANGUAGE: German
REFERENCE COUNT: 39
ENTRY DATE: Entered STN: 1994

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                          Last Updated on STN: 1994
                         *ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS*
ED    Entered STN: 1994
      Last Updated on STN: 1994
AB       The palladium-catalysed coupling of p-bromo
      azo dyes 4 with styrenes 6 and arylacetylenes 9 provides
      arylazostilbenes 7 and -tolanes 10, respectively, in fair-to-good yields.
      Likewise, coupling of azoxy compound 5 with styrenes 6 forms the
      arylazoxystilbenes 8 in high yields.  The influence of substituentes on
      light absorption of the new dyes as well as on the the C-13-NMR shifts of
      the azotolanes 10 are discussed.

L84  ANSWER 94 OF 105  SCISEARCH  COPYRIGHT (c) 2005 The Thomson Corporation
      on STN
ACCESSION NUMBER:     1984:131085  SCISEARCH
THE GENUINE ARTICLE:  SF394
TITLE:                COMPLEXES OF PALLADIUM(II) WITH SOME AZO
                      -COMPOUNDS AND THEIR CATALYTIC PROPERTIES
AUTHOR:               SAFRONOVA L A (Reprint); SHEBALDOVA A D; KHIDEKEL M L
CORPORATE SOURCE:     NG CHERNYSHEVSKII STATE UNIV, CHEM RES INST, SARATOV, USSR
                      (Reprint)
COUNTRY OF AUTHOR:    USSR
SOURCE:               ZHURNAL OBSHCHEI KHIMII, (1984) Vol. 54, No. 2, pp.
                      385-388.
                      ISSN: 0044-460X.
PUBLISHER:            MEZHDUNARODNAYA KNIGA, 39 DIMITROVA UL., 113095 MOSCOW,
                      RUSSIA.
DOCUMENT TYPE:        Article; Journal
FILE SEGMENT:         PHYS
LANGUAGE:             Russian
REFERENCE COUNT:      7
ENTRY DATE:           Entered STN: 1994
                      Last Updated on STN: 1994
ED    Entered STN: 1994
      Last Updated on STN: 1994


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YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL, PASCAL, JICST-EPLUS,
SCISEARCH, WPIX' - CONTINUE? (Y)/N:y


YOU HAVE REQUESTED DATA FROM 11 ANSWERS - CONTINUE? Y/(N):y

L84  ANSWER 95 OF 105  WPIX  COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER:      2003-317763 [31]   WPIX
DOC. NO. NON-CPI:      N2003-253165
DOC. NO. CPI:          C2003-083512
TITLE:                 Optical recording medium, e.g. digital versatile disc,
                       contains trimethine cyanine dye and azo metal chelate
                       compound.
DERWENT CLASS:         E21 E23 G05 L03 P75 T03
PATENT ASSIGNEE(S):    (RICO) RICOH KK
COUNTRY COUNT:         1
PATENT INFORMATION:

      PATENT NO      KIND DATE     WEEK     LA    PG MAIN IPC
      -----------------------------------------------------------
      JP 2002274044   A  20020925 (200331)*       16 B41M005-26
```

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 2002274044	A	JP 2001-86254	20010323

PRIORITY APPLN. INFO: JP 2001-3183 20010111
INT. PATENT CLASSIF.:
MAIN: B41M005-26
SECONDARY: G11B007-24
ADDITIONAL: C09B023-00; **C09B045-00**; C09B067-22
BASIC ABSTRACT:

JP2002274044 A UPAB: 20030516
NOVELTY - An optical recording medium contains a trimethine cyanine dye and an azo metal chelate compound which comprises azo compound (I) and metal, in a weight ratio of 90:10-10:90.

DETAILED DESCRIPTION - An optical recording medium comprises a recording layer on a base plate. The layer contains a trimethine cyanine dye and an azo metal chelate compound which comprises an azo compound of formula (I) and metal. The ratio of trimethine cyanine dye to azo metal chelate compound is 90:10-10:90 by weight.

R1-R6 = optionally substituted alkyl;

Z' = substituent having active hydrogen group e.g. OH, carboxyl, amino, alkylcarboxamide, arylcarboxamide, alkylsulfonamide, arylsulfonamide, carbamoyl, alkylcarbamoyl, arylcarbamoyl, sulfo, sulfino, sulfeno or sulfamoyl.

USE - The recording medium is useful for mass storage recordable photo compact disc e.g. DVD-R (Digital Versatile Disc-Recordable).

ADVANTAGE - The medium can be recorded and reproduced with laser beam of wavelength 670 nm or less with stable high reflectance and high modulation. it has good light resistance and storage stability. The light resistance is better than that of an optical recording medium using a trimethine cyanine dye alone. The medium can be recorded in high density and reproduced stably.

Dwg.0/3

FILE SEGMENT: CPI EPI GMPI
FIELD AVAILABILITY: AB; GI; DCN
MANUAL CODES: CPI: E21-B03; E21-B04; E25-B03; G06-D07; G06-F05;
L03-G04B
EPI: T03-B01D1; T03-B01D6
TECH UPTX: 20030516

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Compounds: The metal atom in the **azo** metal chelate is Mn, Co, **Ni** or Cu. The trimethine cyanine dye is a compound of formula (II).
R7, R8 = optionally substituted alkyl;
Y = H, halogen or optionally substituted alkyl or alkyloxy; and
X- = mono-valent anion.

TECHNOLOGY FOCUS - IMAGING AND COMMUNICATION - Preferred Recording Medium: The refractive index, n, of the single recording layer is 1.5-3.0 (to light of reconstruction wavelength, plus or minus 5 nm) and the extinction coefficient, k, is 0.02-0.3. The optical recording medium has track pitch on the substrate of 0.7-0.8 micron and half groove width of 0.18-0.40 micron. The medium is recorded at wavelength 600-720 nm.

ABEX UPTX: 20030516

EXAMPLE - On a polycarbonate plate (0.6 mm thick) was formed a guide groove having a depth of 1750 Angstrom, half groove width of 0.25 micron and track pitch of 0.74 micron. A 2,2,3,3-tetrafluoropropanol solution of a compound of formula (A1) (50 parts by weight) and a compound of formula

(B3) (50 parts by weight) was applied on the plate by spinning to give an organic dye layer having a thickness of 1000 Angstrom.
A reflection layer having a thickness of 1300 Angstrom was formed with silver on the organic dye layer by a sputter process. On the reflection layer, a protective layer having a thickness of 5 micron was formed with an acrylic type **photopolymer.** The protective layer was bonded with a polycarbonate board having a thickness of 5 micron with an acrylic type **photopolymer** to give an optical recording medium.
The recording medium had (i) reflectance of 63% and modulation of 63% initially stage, (ii) 64% and 62%, respectively, after continuous exposure to Xe light of 40,000 Lux for 20 hours and (iii) 64% and 63%, respectively, after storing at 60 degreesC at 90 % RH for 600 hours.

L84 ANSWER 96 OF 105 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER:	2003-150262 [15] WPIX
DOC. NO. NON-CPI:	N2003-118592
DOC. NO. CPI:	C2003-039081
TITLE:	Optical recording medium for e.g., digital versatile disc recordable system, includes recording layer comprising squarylium metal chelate compound and azo metal chelate compound or formazan metal chelate compound.
DERWENT CLASS:	E21 E23 L03 P75 T03
INVENTOR(S):	KINUGASA, M; NOGUCHI, S; SATOH, T; SHIMIZU, I; TOMURA, T; TOYODA, H; UENO, Y; YAMADA, S; SATO, T
PATENT ASSIGNEE(S):	(KYOW) KYOWA HAKKO KOGYO KK; (KYOX) KYOWA YUKA KK; (RICO) RICOH KK
COUNTRY COUNT:	28

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
EP 1267338	A2	20021218	(200315)*	EN	78	G11B007-24
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR						
JP 2002370451	A	20021224	(200315)		20	B41M005-26
JP 2002370452	A	20021224	(200315)		22	B41M005-26
JP 2002370453	A	20021224	(200315)		19	B41M005-26
JP 2002370454	A	20021224	(200315)		18	B41M005-26
US 2003157291	A1	20030821	(200356)			B32B003-02
US 6737143	B2	20040518	(200433)			B32B003-00

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 1267338	A2	EP 2002-13100	20020613
JP 2002370451	A	JP 2001-180475	20010614
JP 2002370452	A	JP 2001-180538	20010614
JP 2002370453	A	JP 2001-180565	20010614
JP 2002370454	A	JP 2001-180606	20010614
US 2003157291	A1	US 2002-166742	20020611
US 6737143	B2	US 2002-166742	20020611

PRIORITY APPLN. INFO: JP 2001-180606 20010614; JP
2001-180475 20010614; JP
2001-180538 20010614; JP
2001-180565 20010614

INT. PATENT CLASSIF.:
MAIN: B32B003-00; B32B003-02; B41M005-26; G11B007-24

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      SECONDARY:        C09B023-00; C09B045-00; C09B045-14;
                        C09B045-20; C09B045-22; C09B050-00;
                        C09B050-06; C09B057-00; C09B069-02; G11B007-0045
BASIC ABSTRACT:
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EP 1267338 A UPAB: 20030303

NOVELTY - An optical recording medium comprises a substrate (1) and recording layer(s) (2). The recording layer comprises squarylium metal chelate compound(s) comprising a squarylium compound and a metal; and azo metal chelate compound(s) comprising another metal and an azo compound or formazan metal chelate compound(s) comprising another metal and formazan compound(s).

DETAILED DESCRIPTION - An optical recording medium comprises a substrate and recording layer(s). The recording layer comprises squarylium metal chelate compound(s) comprising a squarylium compound and a metal and:

(A) azo metal chelate compound(s) comprising another metal and an azo compound of formula (A-I);

(B) azo metal chelate compound(s) comprising another metal and an azo compound of formula (B-I);

(C) formazan metal chelate compound(s) comprising another metal and formazan compound(s) of formula (C-I) or (C-II); or

(D) formazan metal chelate compound(s) comprising a metal and formazan compound(s) of formula (D-I) or (D-II):

A0, B0 = residue forming (i) heterocyclic ring which may comprise a substituent or (ii) aromatic ring which may comprise a substituent, by combination with corresponding carbon atoms respectively bonded to A1 or B1;

X = active hydrogen-containing substituent.

Z, Z1, Z2 = residue forming a 5- or 6-membered nitrogen-containing heterocyclic ring which may have a substituent by combination with the carbon atom and the nitrogen atom bonded to Z, Z1 and Z2, respectively, and may be condensed with another aromatic ring;

A, A1, A2 = alkyl, aryl, alkylcarbonyl, arylcarbonyl, alkenyl, heterocyclic residue, or alkoxycarbonyl (all optionally having substituent);

B' = alkyl, alkenyl or aryl (all optionally having substituent);

B1, B2 = alkylene or arylene (all optionally having substituent);

W1 = -CH2- or -SO2-;

m, n = 0 or 1.

USE - The optical recording medium is for an optical recording device. It is for exposing to a light beam having a wavelength of 600-720 nm to carry out recording. (All claimed). The optical recording medium is for a digital versatile disc recordable (DVD-R) system.

ADVANTAGE - The metal-chelated squarylium compound provides an optical recording medium with high reliability, high reflectivity and low jitter. The medium also has higher light resistance and higher shelf life. The absorption coefficient of the recording medium is improved.

DESCRIPTION OF DRAWING(S) - The figure shows cross-sectional views of overwritable optical recording media to which the optical recording medium of the invention has been applied.

Substrate 1

Recording layer 2

Dwg.1/3

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FILE SEGMENT:           CPI EPI GMPI
FIELD AVAILABILITY:     AB; GI; DCN
MANUAL CODES:           CPI: E21-C10; E21-C15; E21-C17; E21-C18; E25-B03;
                             E25-E03; L03-G04B
                        EPI: T03-B01
TECH                   UPTX: 20030303
```

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Composition: The

recording layer comprises squarylium metal chelate compound-azo metal chelate compound weight ratio of 90:10 - 20:80 or squarylium metal chelate compound-formazan metal chelate compound weight ratio of 90:10 - 50:50.
Preferred Compounds: The azo metal chelate compound is ionized and forms a salt with another compound ion. The other compound has an amino group. The squarylium metal chelate compound may be of formula (A-II):
R1, R2 = H or alkyl, aralkyl, aryl or heterocyclic group (all optionally having substituent);
M1 = metal atom having coordination capacity, preferably Al;
m1 = 2 or 3;
Either R3, R4 = optionally substituted alkyl; or
R3R4 = alicyclic hydrocarbon ring or heterocyclic ring by combination with adjacent carbon atoms;
R5 = H or alkyl, aralkyl or aryl (all optionally having substituent);
R6 = H, cyano, nitro or alkyl, aralkyl, aryl, or alkoxy (all optionally having substituent);
n = 0-4.
When n = 2-4, R6 may form aromatic ring which may have a substituent by combination with the adjacent two carbon atoms.
The squarylium compound may also be of formula (D-III) or (D-VI):
Either R1, R2 = H or alkyl, aralkyl, aryl or heterocyclic (all optionally having substituent); or
NR1R2 = heterocyclic ring which may have a substituent;
R3 = formula (D-IV)-(D-V);
Either R4, R5 = H or optionally substituted alkyl; or
NR4R5 = heterocyclic ring which may have substituent;
R6-R9 = H, optionally substituted alkyl or alkoxy, hydroxyl or halo;
R4 and R6 or R5 and R7 = optionally substituted nitrogen-containing heterocyclic ring by combination with adjacent N-C-C;
Q1, Q2 = C or N;
R10, R11 = H or optionally substituted alkyl, aryl or aralkyl, or hydroxyl provided that when Q1 is N, R11 does not exist;
R12 = H or optionally substituted alkyl, aryl or aralkyl;
Either R13, R14 = H, optionally substituted alkyl or alkoxy, or halo; or
R13, R14 = optionally substituted alicyclic hydrocarbon ring, aromatic ring or heterocyclic ring by combination with adjacent two carbon atoms;
R15 = H or optionally substituted alkyl, aryl or heterocyclic;
R16 = H, halo or optionally substituted alkyl, alkoxy, aralkyl, aryl, amino or heterocyclic;
Either R17, R18 = optionally substituted alkyl; or
CR17R18 = optionally substituted alicyclic hydrocarbon ring or heterocyclic ring provided that if Q2 is N, R18 does not exist;
R19 = H or optionally substituted alkyl, aralkyl or aryl;
R20 = halo, trifluoromethyl, nitro, cyano, or optionally substituted alkyl, aralkyl or aryl;
When n = 2-4, any adjacent two R20s by combination with the adjacent two carbon atoms may form an optionally substituted aromatic ring.

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Atoms: The metal atom of the **azo** metal chelate compound is manganese, cobalt, **nickel**, and/or copper. The metal atom of the formazan metal chelate compound is vanadium, manganese, iron, cobalt, nickel, copper, zinc and/or palladium, and/or their oxides or halides.

TECHNOLOGY FOCUS - METALLURGY - Preferred Materials: The optical recording medium further comprises a reflective layer containing gold, silver, copper, aluminum, or an alloy.

TECHNOLOGY FOCUS - IMAGING AND COMMUNICATION - Preferred Properties: The refractive index (n) of a single layer of the recording layer is 1.5-3.0

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     and the extinction coefficient (k) is 0.02-0.3 against the light having a
     wavelength range of a recording or reproducing wavelength +/-5 nm. The
     track pitch on the substrate falls within 0.7-0.8 mum and the groove width
     at a half bandwidth fall within 0.18-0.40 mum. The optical recording
     medium is recordable at a wavelength of 600-720 nm.
ABEX                UPTX: 20030303
     EXAMPLE - A mixture of an azo metal chelate compound (X) and squarylium
     metal chelate compound (XI) in a 50:50 weight ratio dissolved in
     2,2,3,3-tetrafluoropropanol was applied by a spinner onto an
     injection-molded polycarbonate substrate having a thickness of 0.6 mm and
     equipped with a guide groove with a depth of 1780 Angstrom, a half
     bandwidth of 0.37 mum and a track pitch of 0.74 mum. An organic dye layer
     having a thickness of 900 Angstrom was formed. A gold reflective layer of
     1300 Angstrom thick was then overlaid by sputtering, followed by the
     formation of a protective layer of 6 mum thick by using an acrylic
     photopolymer. Another injection molded polycarbonate substrate of
     0.6 mm thick was stacked over the protective layer and they were adhered
     with an acrylic photopolymer to obtain an optical recording
     medium:

L84  ANSWER 97 OF 105  WPIX  COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER:      2002-341983 [38]   WPIX
DOC. NO. CPI:          C2002-098284
TITLE:                 Solid pigment formulations, used in printing ink, paint,
                       bulk coloration of polymer or spin coloration
                       of fibers, are based on metal complexes of azo-pyrimidine
                       compounds and intercalated compounds with specified iron
                       content.
DERWENT CLASS:         A60 E21 F06 G02
INVENTOR(S):           FAUBION, K; GOEBEL, R; HERRMANN, U; LINKE, F; GOBEL, R
PATENT ASSIGNEE(S):    (FARB) BAYER AG; (FAUB-I) FAUBION K; (HERR-I) HERRMANN U;
                       (LINK-I) LINKE F
COUNTRY COUNT:         30
PATENT INFORMATION:

     PATENT NO      KIND DATE     WEEK    LA   PG MAIN IPC
     ---------------------------------------------------------
     EP 1174473       A2 20020123 (200238)* GE   16 C09B067-22
         R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
            RO SE SI TR
     CZ 2001002645    A3 20020313 (200238)          C09B045-12<--
     DE 10035494      A1 20020131 (200238)          C09B045-22<--
     JP 2002080744    A  20020319 (200238)       13 C09B067-20
     US 2002111465    A1 20020815 (200256)          C09B045-00<--
     MX 2001007405    A1 20020501 (200368)          C09B067-22

APPLICATION DETAILS:

     PATENT NO      KIND                     APPLICATION        DATE
     -------------------------------------------------------------------
     EP 1174473       A2                    EP 2001-115789      20010711
     CZ 2001002645    A3                    CZ 2001-2645        20010719
     DE 10035494      A1                    DE 2000-10035494    20000721
     JP 2002080744    A                     JP 2001-213456      20010713
     US 2002111465    A1                    US 2001-907161      20010717
     MX 2001007405    A1                    MX 2001-7405        20010720

PRIORITY APPLN. INFO: DE 2000-10035494     20000721
INT. PATENT CLASSIF.:
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MAIN: **C09B045-00**; **C09B045-12**;
C09B045-22; C09B067-20; C09B067-22
SECONDARY: C07F015-02; C07F015-04; C07F019-00; C08K005-56;
C09B045-14; C09D005-06; C09D011-00; C09D011-02;
C09D017-00; C09D201-00; D06P001-10; D06P005-00

BASIC ABSTRACT:

EP 1174473 A UPAB: 20030214

NOVELTY - In solid pigment formulations containing metal complex(es) (I) of an azo-pyrimidine compound (II), which may have substituent(s) and/or condensed ring system(s), and other intercalated compound(s) (III) as pigment. (I) contains not less than 30 ppm iron (Fe) with respect to (I) and (III).

DETAILED DESCRIPTION - In solid pigment formulations containing metal complex(es) (I) of an azo-pyrimidine compound (II), which may have substituent(s) and/or condensed ring system(s), of the given formula and other intercalated compound(s) (III) as pigment. (I) contains not less than 30 ppm iron (Fe) with respect to (I) and (III):

X, Y = rings optionally mono- or di-substituted by oxo (=O), thio (=S), imino (=NR7), amino (-NR6R7), oxy (-OR6), mercapto (-SR6), carboxyl (-COOR6), cyano (-CN), amido (-CONR6R7), sulfonyl (-SO2R8), cyanamino (-N(R6)-CN), alkyl, cycloalkyl, aryl or aralkyl, in which each ring has a total of 3 endo- and exocyclic double bonds;

R1, R2, R3, R4 = H, (cyclo)alkyl or ar(alk)yl or complete a 5- or 6-membered ring optionally with other condensed ring(s);

R5 = -OH, -NR6R7, (cyclo)alkyl or ar(alk)yl;

R6 = hydrogen (H), (cyclo)alkyl or ar(alk)yl;

R7 = H, CN, alkyl, (cyclo)alkyl, ar(alk)yl or acyl;

R8 = (cyclo)alkyl or ar(alk)yl;

R1-8 = groups in which CH groups may be substituted; and

m, n, o, p = 1 or, if the double bond indicated by the dotted line starts from the N atom, also 0.

An INDEPENDENT CLAIM is also included for the preparation of the pigment formulation by complexing an iron salt and another metal salt with (II) in amounts giving the specified iron content in the product, and reacting the resultant (I) with (III).

USE - The pigment formulation is used in the production of printing inks, binder paints, for bulk coloration of synthetic, semisynthetic or natural macromolecular materials, especially polyvinyl chloride, polystyrene, polyamide, polyethylene or polypropylene, for spin coloration of natural, regenerated or artificial fibers, e.g. cellulose, polyester, polycarbonate, polyacrylonitrile or polyamide fibers, and for printing textiles and paper (all claimed). They are also useful in lacquers of all types and for coloring paper and printing laminates.

ADVANTAGE - Pigments described in EP-A-73463 and EP-A-994164 have valuable color properties but are of limited application, as the properties can be changed only by costly after-treatment, e.g. tempering, milling or coating. The present new pigment forms no longer have this drawback. They can be isolated by filtration of an aqueous suspension, washing and drying and then ground. They have especially good dispersibility and high strength of color and are very finely divided. The solid formulations are excellent for all pigmentation purposes.

Dwg.0/0

FILE SEGMENT: CPI
FIELD AVAILABILITY: AB; GI; DCN
MANUAL CODES: CPI: A08-E04; E21-C13; E21-C17; F03-F05; F03-F06;
F03-F07; F03-F09; F03-F17; F03-F30; G02-A03A;
G02-A04B
TECH UPTX: 20020618

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Formulation: The pigment formulation contains 30-2000 ppm Fe with respect to the sum of the

complex(es) (I) and intercalated compound(s) (III). It contains not less than 2 metal complexes of (II), one being an Fe complex, each intercalated with (III). (II) preferably is an azopyrimidone compound of formula (IIA) or (IIB).
R'5 = -OH or -NH2;
R'1, R'2, R'3, R'4 = H; and
M'1, M1 = H, -OH, -NH2, -NHCN, arylamino or acylamino.
(I) are complexes of the mono-, di-, tri- and tetraanions of (II) with lithium (Li), magnesium (Mg), iron (Fe), cobalt (Co), aluminum (Al), chromium (Cr) and/or especially sodium (Na), potassium (K), calcium (Ca), barium (Ba), nickel (Ni), zinc (Zn), copper (Cu), manganese (Mn) and/or lanthanum (La), particularly the Ni salt or complex of (II). The intercalated compound is a cyclic or acyclic organic compound, especially melamine.

ABEX UPTX: 20020618
SPECIFIC COMPOUNDS - A specific example of the azo compound (II) is azobarbituric acid of formula (IIC).
A specific example of the intercalated compound (III) is melamine.

EXAMPLE - 5 kg suspension containing 12.5 weight% potassium salt of **azobarbituric** acid were treated with 24.9 weight% **nickel** chloride hexahydrate (NiCl2 . 6 H2O)(1970 g) solution. Then iron-II sulfate heptahydrate (FeSO4 . 7 H2O) solution was optionally added and melamine (504 g) was stirred in and the suspension was made up to 10 liters with deionized water. It was then heated to 98 degrees C, with vigorous stirring, and kept at this temperature for 4 hours. After adjusting to pH 5 with 5% potassium hydroxide solution, the suspension was filtered and the product was washed, dried in vacuo and ground in a laboratory mill. The resultant pigment powder was added to a melamine-alkyl with lacquer, according to DIN 53238 and evaluated. A control (A) containing no FeSO4 . 7 H2O was compared with samples treated with (B) 0.145, (C) 0.29, (D) 0.435, (E) 0.58, (F) 5.8 g FeSO4 . 7 H2O, corresponding to Fe contents of (A) 0, (B) 25, (C) 50, (D) 75, (E) 100, (F) 1000 ppm. The surface area of the pigment was (A) 106, (B) 140, (C) 153, (D) 138, (E) 170, (F) 145 m2/g; and the relative strength of color in the lacquer was (A) 100, (B) 114, (C) 118, (D) 120, (E) 135, (F) 116%.

L84 ANSWER 98 OF 105 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 2002-083874 [12] WPIX
DOC. NO. NON-CPI: N2002-062261
DOC. NO. CPI: C2002-025699
TITLE: Pigments used in color filters for liquid crystal displays, photolacquers and printing inks are intercalation or inclusion compounds or solid solutions of azobarbituric acid metal complex and e.g. melamine or **polymer.**
DERWENT CLASS: A21 A25 A89 E21 E23 G02 G06 L03 P81 P85 U14 W05
INVENTOR(S): FAUBION, K; HERRMANN, U; NYSSEN, P; RICHTER, R; WITT, J; WOLF, M
PATENT ASSIGNEE(S): (FARB) BAYER AG; (FAUB-I) FAUBION K; (HERR-I) HERRMANN U; (NYSS-I) NYSSEN P; (RICH-I) RICHTER R; (WITT-I) WITT J; (WOLF-I) WOLF M
COUNTRY COUNT: 32
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
DE 10025303	A1	20011011	(200212)*		18	C09B045-12<--
CA 2342465	A1	20011004	(200212)	EN		C09B045-14<--
EP 1146087	A1	20011017	(200212)	GE		C09B045-14<--

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    R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
       RO SE SI TR
CN 1318593      A  20011024 (200213)          C09B045-48<--
JP 2001354869   A  20011225 (200216)       20 C09B067-20
KR 2001095243   A  20011103 (200223)          C09B062-012
US 2002034696   A1 20020321 (200224)          G02F001-1335
US 6596446      B2 20030722 (200354)          G02B005-20
EP 1146087      B1 20031105 (200377)  GE      C09B045-14<--
    R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR
DE 50100889     G  20031211 (200382)          C09B045-14<--
TW 593558       A  20040621 (200506)          C09B045-00<--
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APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 10025303	A1	DE 2000-10025303	20000522
CA 2342465	A1	CA 2001-2342465	20010330
EP 1146087	A1	EP 2001-106443	20010323
CN 1318593	A	CN 2001-117890	20010404
JP 2001354869	A	JP 2001-104524	20010403
KR 2001095243	A	KR 2001-17541	20010403
US 2002034696	A1	US 2001-825322	20010403
US 6596446	B2	US 2001-825322	20010403
EP 1146087	B1	EP 2001-106443	20010323
DE 50100889	G	DE 2001-00100889	20010323
		EP 2001-106443	20010323
TW 593558	A	TW 2001-108052	20010404

FILING DETAILS:

PATENT NO	KIND		PATENT NO
DE 50100889	G	Based on	EP 1146087

PRIORITY APPLN. INFO: DE 2000-10016665 20000404

INT. PATENT CLASSIF.:
MAIN: **C09B045-00**; **C09B045-12**; **C09B045-14**; **C09B045-48**; C09B062-012; C09B067-20; G02B005-20; G02F001-1335
SECONDARY: **C09B045-08**; **C09B045-22**; C09B067-22; C09D011-00; C09D011-02; G02B005-22; G02F001-13; G03F007-004; G03F007-04; G09F009-35

BASIC ABSTRACT:

DE 10025303 A UPAB: 20020416

NOVELTY - Pigments used in color filters for liquid crystal displays comprise metal complex intercalates of metal ions with mono-, di-, tri- or tetraanions of azobarbituric acid compounds or their tautomers, substituted by hydroxyl, amino, cyanimino, acyl(aryl)amino groups in the 2,2'-positions and OH or NH2 groups in the 5,5'-positions of the pyrimidin-4-one rings, intercalated with different compound(s).

DETAILED DESCRIPTION - Pigments used in color filters for liquid crystal displays comprise metal complex intercalates (I) of:

(a) metal ions, selected from lithium (Li), cesium (Cs), magnesium (Mg), cadmium (Cd), cobalt (Co), aluminum (Al), chromium (Cr), tin (Sn), lead (Pb) and especially sodium (Na), potassium (K), calcium (Ca), strontium (Sr), barium (Ba), zinc (Zn), iron (Fe), nickel (Ni), copper (Cu), manganese (Mn) and lanthanum (La), with

(b) mono-, di-, tri- or tetraanions of azobarbituric acid compounds (II) or their tautomers, substituted by hydroxyl (OH), amino (NH2),

cyanimino (NH-CN), acylamino or arylamino groups in the 2,2'-positions and OH or NH2 groups in the 5,5'-positions of the pyrimidin-4-one rings, intercalated with

(c) different compound(s).

R, R' = OH, NH2, NH-CN, acylamino or arylamino;

R1, R1' = OH or NH2.

USE - Compounds (I) are used in printing inks, preferably with an aqueous-organic vehicle, for the production of color filters by photolithography, offset printing or mechanical, piezo-mechanical or thermal ink-jet printing; in pigment and pigmented formulations; in photolacquers; and in color filters, especially color filters for liquid crystal displays (LCDs), and the production of color filters for LCDs (all claimed).

ADVANTAGE - These pigments give better color purity, transparency and light fastness than usual. They are readily dispersible in polar and apolar organic media, so that they can be stabilized in finely-divided form in various matrix systems or medium for making color filters. They have the required fastness and coloristic properties, especially color purity and transparency, when mixed with one another and other pigments.

Dwg.0/0

FILE SEGMENT: CPI EPI GMPI
FIELD AVAILABILITY: AB; GI; DCN
MANUAL CODES: CPI: A08-E04; A11-C02B; A12-B01; A12-L03B; A12-L03D; A12-W07D; E21-C13; E21-C17; G02-A04A; G05-F03; L03-G05B
EPI: U14-K01; W05-E
TECH UPTX: 20020416

TECHNOLOGY FOCUS - IMAGING AND COMMUNICATION - Preferred Process: (claimed) Color filters for liquid crystal displays are produced by preparing a photolacquer by milling compound(s) (I) in an organic solvent, optionally with addition of a binder resin and dispersant, then adding photocurable monomer, photoinitiator and optionally more binder and solvent. The photolacquer is applied to a suitable substrate, generally glass plate, by a suitable coating process, e.g. roller, spray, spin, dip or air-knife coating, exposed through a photomask, hardened and developed to the finished color filter.

Preferred Products: (claimed) The products are color filters containing compound(s) (I); and liquid crystal displays with at least one of these filters.

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Components: Suitable intercalates include (a)cyclic organic compounds, especially melamine or a melamine derivative. The metal complexes are of formula (IIA):

Me = metals.

R, R', R1, R1' = OH;

They preferably have standard color fractions of x = 0.38-0.72 and y = 0.14-0.55. (I) especially are inclusion compounds, intercalation compounds and solid solutions of a **nickel** 1:1 complex of 2,2',5,5'-tetrahydroxy-**azobarbituric** acid (IIB) of formula (II) and 2,4,6-triamino-1,3,5-triazine compound(s) of formula (III):

R6 = hydrogen (H) or 1-4 carbon (C) (hydroxy)alkyl.

The azo compound preferably is in the form of a mono- or di-K salt, tautomer or hydrates, especially the mono- or di-K salt of (IIB).

Preferred Formulations: Pigment formulations contain compound(s) (I) and organic compound(s) selected from terpenes, terpenoids and fatty acid esters. Other formulations contain (I) or the pigment formulation, organic solvent(s) and optionally a binder resin and dispersant. Preferred pigment formulations contain (a) a compound based on an azo compound of formula (II); (b) a 1:1 azo-metal complex of (II) or a tautomer; or (c) an inclusion compound, intercalation compound or solid solution of a nickel

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     1:1 complex of (IIB) and (III);
     R1, R1'  = OH
     TECHNOLOGY FOCUS - POLYMERS - Preferred Components: Suitable
     intercalates include a polycondensate, preferably based on urea and
     formaldehyde and block copolymers based on (poly)stearic acid,
     (poly)ethylene oxide and (poly)propylene oxide.
     Preferred Formulations: Pigment formulations contain homo- or
     copolymers, e.g. random or block copolymers with a water
     solubility less than 1, especially less than 0.1 g/l at 20 degreesC.
     Photolacquers contain photocurable monomer(s), photoinitiator(s) and
     compound(s) (I). Preferred pigment formulations contain 1-100, especially
     0.5-60 wt.% compound(s) (I) based on (II) and surfactant(s) of formula
     (IV).
     Z   = H or X Cat;
     R15  = H or 1-4C alkyl;
     R16  = H or methyl (CH3);
     R17  = H, 1-4C alkyl, 1-4C alkoxy, 1-4C alkoxycarbonyl or phenyl;
     m   = 1-4;
     n   = 6-120;
     R18  = H, CH3 and phenyl (Ph), with 0-60 wt.% CH3 and 100-40 wt.% H or
     0-40 wt.% Ph and 100-60 wt.% H;
     X   = -SO3, -SO2, -PO3 or -CO-(R19)-COO;
     Cat  = H, Li, Na, K, NH4 or HOCH2CH2-NH3 cation or 2 cations if
     X = -PO3;
     R19 = a divalent aliphatic or aromatic group, preferably 1-4C alkylene,
     especially ethylene, a 2-4C group with one unsaturated bond, especially
     acetylene, or (substituted) phenylene, especially ortho-phenylene, which
     may have substituent(s), especially 1-4C alkyl, 1-4C alkoxy, 1-4C
     alkoxycarbonyl or phenyl.
ABEX                 UPTX: 20020416
     SPECIFIC COMPOUNDS - A specific example of the intercalated compound is
     melamine.

     EXAMPLE - A mixture of 25 g benzenesulfonyl hydrazide, 200 ml water, 20 ml
     10 N hydrochloric acid and 1.25 g condensation product of stearic acid
     with taurine was stirred for 30 minutes. Diazotization (sodium nitrite,
     cold) and neutralization gave an emulsion of benzenesulfonyl azide. This
     was treated with 38.2 g barbituric acid and stirred for 10 minutes, then
     adjusted to pH 8, stirred at 50 degreesC for 2 hours, adjusted to pH 4.8
     and stirred for 1 hour at 70 degreesC and 3 hours at 90 degreesC, giving a
     suspension of the sodium salt (V) of azobarbituric acid containing about
     22 g benzenesulfonamide (by-product). This was heated to 95-100 degreesC,
     filtered and washed with boiling water. A solution of 34.5 g nickel
     chloride hexahydrate (NiCl2.6H2O) and 13 g anhydrous sodium acetate in 100
     ml water was dripped in 5 minutes into a suspension of the (V) filter cake
     in 500 ml water at 80 degreesC. After stirring at 80 degreesC for 1 hour,
     42 g melamine were added and the mixture was stirred for 1 hour at 80
     degreesC and 2 hours at 95 degreesC, then filtered and washed with hot
     water. The wet filter cake contained 42.6 weight% solids. In an
     alkyd-melamine lacquer system, the dried and ground pigment had standard
     color fractions of x = 0.438 and y = 0.464 and a standard lightness Y of
     58.38, determined to DIN 53238.

     DEFINITIONS - Preferred Definitions:
     R, R'  = OH or NHCN.

L84  ANSWER 99 OF 105  WPIX  COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER:      2000-319925 [28]   WPIX
CROSS REFERENCE:       2000-305503 [27]; 2000-305504 [27]
DOC. NO. CPI:          C2000-097108
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TITLE: Solid pigment formulation based on azopyrimidine metal complex inclusion compound, useful in printing ink, distemper, paint, for coloring **polymer** or fiber or printing textile or paper is alkaline in aqueous suspension.
DERWENT CLASS: A60 E21 F06
INVENTOR(S): HERRMANN, U; LINKE, F; SOMMER, R; STOLP, G
PATENT ASSIGNEE(S): (FARB) BAYER AG
COUNTRY COUNT: 25
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
EP 994164	A1	20000419	(200028)*	GE	23	C09B067-00
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI						
EP 994164	B1	20020724	(200256)	GE		C09B067-00
R: CH DE ES FR GB IT LI						
DE 59902101	G	20020829	(200264)			C09B067-00
ES 2180246	T3	20030201	(200322)			C09B067-00

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 994164	A1	EP 1999-119101	19991004
EP 994164	B1	EP 1999-119101	19991004
DE 59902101	G	DE 1999-502101	19991004
		EP 1999-119101	19991004
ES 2180246	T3	EP 1999-119101	19991004

FILING DETAILS:

PATENT NO	KIND		PATENT NO
DE 59902101	G	Based on	EP 994164
ES 2180246	T3	Based on	EP 994164

PRIORITY APPLN. INFO: DE 1998-19847586 19981015
INT. PATENT CLASSIF.:
MAIN: C09B067-00
SECONDARY: C09B067-10
ADDITIONAL: C08K005-3462; **C09B045-14**
BASIC ABSTRACT:

EP 994164 A UPAB: 20030402

NOVELTY - In solid pigment formulations containing metal complex(es) of an azopyrimidine compound, optionally with condensed ring system(s), as pigment, and included compound(s), the novelty is that a suspension of the formulation in 20 times the amount of water has pH over 6.5.

DETAILED DESCRIPTION - In solid pigment formulations containing metal complex(es) of an azopyrimidine compound of formula (I), optionally with condensed ring system(s) as pigment, and included compound(s), the novelty is that a suspension of the formulation in 20 times the amount of water has pH over 6.5.

X, Y = rings with 1 or 2 substituents selected from oxo (=O), thioxo (=S), imino (=NR7), amino (-NR6R7), -OR6, -SR6, -COOR6, cyano (-CN), -CONR6R7, -SO2R8, -N(CN)-R6, (cyclo)alkyl and ar(alk)yl, such that each ring has a total of 3 endo- and exocyclic double bonds;
R6 = hydrogen (H), (cyclo)alkyl or ar(alk)yl;
R7 = H, CN, (cyclo)alkyl, ar(alk)yl or acyl;

R8 = (cyclo)alkyl or ar(alk)yl;

R1, R2, R3, R4 = H, (cyclo)alkyl or ar(alk)yl or condensed 5- or 6-membered rings;

R5 = -OH, -NR6R7, (cyclo)alkyl or ar(alk)yl;

m, n, o, p = 1 or also 0 if there are double bonds from the ring N atoms;

R1-8 may = groups with substituted CH groups

An INDEPENDENT CLAIM is also included for the production of the pigment formulation.

USE - The pigment formulations are used for making printing inks, distempers or binder paints, for bulk coloration of (semi)synthetic or natural macromolecular substances, especially polyvinyl chloride, polystyrene, polyamide, polyethylene or polypropylene, for spin dyeing natural, regenerated or synthetic fibers, e.g. cellulose, polyester, polycarbonate, polyacrylonitrile or polyamide fibers and for printing textiles and paper (all claimed).

ADVANTAGE - Inclusion compounds, intercalation compounds and solid solutions of the metal complexes produced by existing methods have very hard grains and are difficult to disperse. The present formulations have much softer grains and very much better dispersibility. They give relatively strong and more brilliant colors in pigmented substrates.

Dwg.0/0

FILE SEGMENT:	CPI
FIELD AVAILABILITY:	AB; GI; DCN
MANUAL CODES:	CPI: A08-E04; E21-C13; E21-C17; F03-F03; F03-F05; F03-F06; F03-F07; F03-F09; F03-F17; F03-F30; F05-A06D

TECH UPTX: 20000613

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Components: The metal complex comprises mono-, di-, tri- and tetraanions of (I) with lithium, cesium, magnesium, cadmium, cobalt, aluminum, chromium, tin, lead, sodium, potassium, calcium, strontium, barium, zinc, iron, copper, manganese or especially nickel. The included compound is an (a)cyclic organic compound, especially melamine.

Preferred Composition: The aqueous suspension has pH 7-9.

Preferred Production: (claimed) The formulation is produced by from (a) a metal complex and included compound(s) giving an aqueous suspension with pH at most 6.5, preferably 2-5, by (b) adjusting to pH over 6.5 with an inorganic and/or organic base and optionally adding other additives and (c) drying.

ABEX UPTX: 20000613

SPECIFIC COMPOUNDS - A specific example of the azo compound is azobarbituric acid. A specific example of the included compound is melamine.

EXAMPLE - 0.105 mole 24% aqueous solution of nickel chloride hexahydrate were dripped into a homogeneous suspension of 0.1 mole water-wet paste of the sodium salt of azobarbituric acid in 500 ml distilled water at 95degreesC. The mixture was stirred for 30 minutes to form the lake, then 0.2 mole melamine were added and the mixture was stirred until the intercalation reaction was complete. The mixture was adjusted to pH 5 with aqueous sodium hydroxide solution, then the produced was filtered and washed to remove electrolyte, giving a wet paste containing 43% solids. In a control, this paste was dried in vacuo at 80degreesC and milled, giving a product (A) with pH at most 6.5 in aqueous suspension. A suspension of 186 g wet paste of the melamine intercalation compound of **azobarbituric** acid **nickel** complex in 814 ml water was heated to 80degreesC, adjusted to pH 7.0-7.5 with about 1.3 g N,N-dimethylethanolamine and stirred at this pH and 80degreesC for 2 hours. It was then filtered, dried in vacuo at 80degreesC and milled. The product (B) had pH over 7 in aqueous suspension. (B) was dispersed in a white alkyd/melamine resin lacquer systems. After a dispersion time of 1 hour, the color strength was 3.7% higher than that obtained from (A) after 2.5 hours.

DEFINITIONS - Preferred Definitions:
X = a ring of formula (IIA-E);
L, M = =O, =S or =NR6;
L1 = H, -OR6, -SR6, -NR6R7, -COOR6, -CONR6R7, CN, (cyclo)alkyl or ar(alk)yl;
M1 = -OR6, -SR6, -NR6R7, -COOR6, -CONR6R7, -CN, -SO2R8, -N(CN)-R6, (cyclo)alkyl or ar(alk)yl;
M1 and R1 or M1 and R2 may = a 5- or 6-membered ring
. In particular,
X = (a) (IIC) or (b) (IID) with
R5 = -OH or -NH2; and
Y = (a) (IIC) or (b) (IID) with
R5 = OH;
R1, R2 = H;
L = =O;
M1 = H, -OH, -NH2, -NHCN, arylamino or acylamino

L84 ANSWER 100 OF 105 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 2000-305503 [27] WPIX
CROSS REFERENCE: 2000-305504 [27]; 2000-319925 [28]
DOC. NO. CPI: C2000-092901
TITLE: Azo pyrimidine metal complex inclusion compounds, useful in printing ink, distemper, paint, for coloring **polymer** or fiber or printing textile or paper is alkaline in aqueous suspension, have low dispersion hardness.
DERWENT CLASS: A60 E21 F01 F06 G02
INVENTOR(S): HERRMANN, U; LINKE, F; SOMMER, R; STOLP, G; FAUBION, K; GOBEL, R; PFUTZENREUTER, D; GOEBEL, R; PFUETZENREUTER, D; GBEL, R
PATENT ASSIGNEE(S): (FARB) BAYER AG; (FARB) BAYER CHEM AG
COUNTRY COUNT: 33
PATENT INFORMATION:

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PATENT NO      KIND DATE     WEEK     LA    PG MAIN IPC
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EP 994162      A1 20000419 (200027)* GE    19 C09B045-14<--
    R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
       RO SE SI
DE 19847586    A1 20000420 (200027)           C09B067-20
CZ 9903646     A3 20000517 (200031)           C09B067-20
CZ 9903647     A3 20000517 (200031)           C09B045-00<--
JP 2000119544  A  20000425 (200031)        15 C09B045-22<--
JP 2000129152  A  20000509 (200032)        14 C09B045-14<--
CN 1251375     A  20000426 (200036)           C09B045-00<--
CN 1251377     A  20000426 (200036)           C09B045-22<--
CA 2285800     A1 20000415 (200037)  EN       C09B045-14<--
CA 2285827     A1 20000415 (200037)  EN       C09B045-14<--
DE 19924764    A1 20001130 (200064)           C09B045-22<--
KR 2000029055  A  20000525 (200110)           C09B062-255
KR 2000029056  A  20000525 (200110)           C09B045-14<--
US 6211346     B1 20010403 (200120)           C09B029-036
US 6261358     B1 20010717 (200142)           C09B067-00
MX 9909293     A1 20001001 (200158)           C09B067-36
MX 9909294     A1 20001001 (200158)           C09B067-36
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     MX 9909295       A1 20001001 (200158)          C09B067-36
     US 6350307       B1 20020226 (200220)          C09B045-14<--
     TW 482813        A  20020411 (200313)          C09B067-00
     ES 2191393       T3 20030901 (200365)          C09B045-14<--
     EP 994162        B1 20040114 (200406)  GE      C09B045-14<--
         R: CH DE ES FR GB IT LI
     DE 59908291      G  20040219 (200414)          C09B045-14<--
     ES 2214785       T3 20040916 (200462)          C09B045-14<--

APPLICATION DETAILS:

     PATENT NO       KIND                     APPLICATION         DATE
     ----------------------------------------------------------------
     EP 994162        A1                     EP 1999-119099       19991004
     DE 19847586      A1                     DE 1998-1047586      19981015
     CZ 9903646       A3                     CZ 1999-3646         19991014
     CZ 9903647       A3                     CZ 1999-3647         19991014
     JP 2000119544    A                      JP 1999-292424       19991014
     JP 2000129152    A                      JP 1999-292434       19991014
     CN 1251375       A                      CN 1999-121383       19991015
     CN 1251377       A                      CN 1999-121382       19991015
     CA 2285800       A1                     CA 1999-2285800      19991012
     CA 2285827       A1                     CA 1999-2285827      19991012
     DE 19924764      A1                     DE 1999-1024764      19990529
     KR 2000029055    A                      KR 1999-44450        19991014
     KR 2000029056    A                      KR 1999-44451        19991014
     US 6211346       B1                     US 1999-415339       19991008
     US 6261358       B1                     US 1999-415171       19991008
     MX 9909293       A1                     MX 1999-9293         19991011
     MX 9909294       A1                     MX 1999-9294         19991011
     MX 9909295       A1                     MX 1999-9295         19991011
     US 6350307       B1                     US 1999-415342       19991008
     TW 482813        A                      TW 1999-117740       19991014
     ES 2191393       T3                     EP 1999-119100       19991004
     EP 994162        B1                     EP 1999-119099       19991004
     DE 59908291      G                      DE 1999-508291       19991004
                                             EP 1999-119099       19991004
     ES 2214785       T3                     EP 1999-119099       19991004

FILING DETAILS:

     PATENT NO        KIND                     PATENT NO
     ------------------------------------------------------
     ES 2191393       T3 Based on              EP 994163
     DE 59908291      G  Based on              EP 994162
     ES 2214785       T3 Based on              EP 994162

PRIORITY APPLN. INFO: DE 1999-19924764     19990529; DE
                      1998-19847586     19981015; DE
                      1999-19924763     19990529
INT. PATENT CLASSIF.:
           MAIN:      C09B029-036; C09B045-00; C09B045-14;
                      C09B045-22; C09B062-255; C09B067-00; C09B067-20
      SECONDARY:      C07F019-00; C08J003-20; C08K005-3462; C08K005-36;
                      C09B063-00; C09B067-10; C09D011-02; C09D017-00;
                      D01F001-04; D06P001-00; D06P001-10; D06P001-44;
                      D06P003-52; D06P005-00; D06P005-17; D21H017-67
     ADDITIONAL:      C09B067-22; C09B067-36
BASIC ABSTRACT:
     EP    994162 A UPAB: 20040928
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NOVELTY - Metal complex(es) of an azo pyrimidine compound, optionally with condensed ring system(s), as pigment, and included compound(s) have a dispersion hardness less than 250.

DETAILED DESCRIPTION - Metal complex(es) of an azo pyrimidine compound of formula (I), optionally with condensed ring system(s) as pigment, and included compound(s)have a dispersion hardness less than 250;

X, Y = rings with 1 or 2 substituents selected from oxo (=O), thioxo (=S), imino (=NR7), amino (-NR6R7), -OR6, -SR6, -COOR6, cyano (-CN), -CONR6R7, -SO2R8, -N(CN)-R6, (cyclo)alkyl and ar(alk)yl, such that each ring has a total of 3 endo- and exocyclic double bonds;

R6 = hydrogen (H), (cyclo)alkyl or ar(alk)yl;

R7 = H, CN, (cyclo)alkyl, ar(alk)yl or acyl;

R8 = (cyclo)alkyl or ar(alk)yl;

R1, R2, R3, R4 = H, (cyclo)alkyl or ar(alk)yl or condensed 5- or 6-membered rings;

R5 = -OH, -NR6R7, (cyclo)alkyl or ar(alk)yl;

m, n, o, p = 1 or also 0 if there are double bonds from the ring N atoms;

R1-8 may = groups with substituted CH groups.

An INDEPENDENT CLAIM is also included for the preparation of the complexes.

USE - The compounds are used with a dispersant in pigment formulations and for making printing inks, distempers or binder paints, for bulk coloration of (semi)synthetic or natural macromolecular substances, especially polyvinyl chloride, polystyrene, polyamide, polyethylene or polypropylene, for spin dyeing natural, regenerated or synthetic fibers, e.g. cellulose, polyester, polycarbonate, polyacrylonitrile or polyamide fibers and for printing textiles and paper (all claimed). The solid pigment formulations are suitable for all pigment applications.

ADVANTAGE - Inclusion compounds, intercalation compounds and solid solutions of the metal complexes produced by existing methods have very hard grains and are difficult to disperse. The present new pigment forms have much softer grains and very much better dispersibility. They give stronger and more brilliant colors in pigmented substrates.

Dwg.0/0

FILE SEGMENT: CPI

FIELD AVAILABILITY: AB; GI; DCN

MANUAL CODES: CPI: A08-E04; E21-C13; E21-C17; F03-F03; F03-F05; F03-F06B; F03-F07B; F03-F09; F03-F17; F03-F30; G02-A03A; G02-A04B

TECH UPTX: 20000606

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Components: The metal complex comprises mono-, di-, tri- and tetraanions of (I) with lithium, cesium, magnesium, cadmium, cobalt, aluminum, chromium, tin, lead or preferably sodium, potassium, calcium, strontium, barium, zinc, iron, copper, manganese or especially nickel. The included compound is an (a)cyclic organic compound, especially melamine. The metal complexes have a BET specific surface area less than 150 m2/g.

Preparation: (claimed) The complex inclusion compounds are prepared by tempering compounds with a dispersion hardness greater than 250 in the presence of water and optionally organic solvent either at pH 1-4, preferably 1-3, especially 1.5-2.5 or at pH 9-13, preferably 10-11 and at 80-180, preferably 90-140, especially 95-100 degreesC.

ABEX UPTX: 20000606

SPECIFIC COMPOUNDS - A specific example of the azo compound is azobarbituric acid. A specific example of the included compound is melamine.

EXAMPLE - A homogeneous suspension of 425 g water-wet paste of the sodium salt of azobarbituric acid (40% solids = 170 g) in 5,000 ml distilled water was treated with 122.4 g nickel chloride hexahydrate and 126.1 g melamine, then heated and stirred at 95 degreesC for 2 hours. After adjusting to pH 5.0 with sodium acetate, the solid was filtered, washed to remove electrolyte, dried in vacuo and milled. The resultant pigment powder (A) had a surface area of 160 m2/g and dispersion hardness greater than 250. A stirred homogeneous suspension of 657 g wet paste of this melamine intercalation compound of **azobarbituric** acid **nickel** complex (45% solids = 295.6 g) in 5,000 ml water was acidified with hydrochloric acid and tempered for 2 hours at 100 degreesC and pH 2. After cooling to 95 degreesC, it was adjusted to pH 5.0 with aqueous sodium hydroxide solution. It was then filtered, dried in vacuo at 80 degreesC and milled. The product (B) had a BET specific surface area of 88 m2/g and dispersion hardness less than 250 (DIN 53775, part 7).

DEFINITIONS - Preferred Definitions:
X = a ring of formula (IIA-E);
L, M = =O, =S or =NR6;
L1 = H, -OR6, -SR6, -NR6R7, -COOR6, -CONR6R7, CN, (cyclo)alkyl or ar(alk)yl;
M1 = -OR6, -SR6, -NR6R7, -COOR6, -CONR6R7, -CN, -SO2R8, -N(CN)-R6, (cyclo)alkyl or ar(alk)yl;
M1 and R1 or M1 and R2 may = a 5- or 6-membered ring.
In particular,
X = (a) (IIC) or (b) (IID) with
R5 = -OH or -NH2; and
Y = (a) (IIC) or (b) (IID) with
R5 = OH;
R1, R2 = H;
L = =O;
M1 = H, -OH, -NH2, -NHCN, arylamino or acylamino.

L84 ANSWER 101 OF 105 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER: 2001-123996 [14] WPIX
DOC. NO. NON-CPI: N2001-091086
DOC. NO. CPI: C2001-036180
TITLE: Solid formulation, e.g. for pigmenting paint, coating, paper, building material, **polymer**, printing ink or ink-jet ink, contains water-dispersible graft **polymer** of unsaturated hydrophobic monomer on (modified) natural protective colloid.
DERWENT CLASS: A18 A25 A60 A82 A97 E21 E23 F06 F09 G02 T04
INVENTOR(S): GIESECKE, H; HAUSCHEL, B; NYSSEN, P; PFUETZENREUTER, D
PATENT ASSIGNEE(S): (FARB) BAYER AG
COUNTRY COUNT: 3
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
DE 10022371	A1	20001123	(200114)*		24	C09D011-10
GB 2351087	A	20001220	(200114)			C09D011-00
US 6489382	B1	20021203	(200301)			C08K005-34

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 10022371	A1	DE 2000-10022371	20000508
GB 2351087	A	GB 2000-11703	20000515
US 6489382	B1	US 2000-571054	20000515

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PRIORITY APPLN. INFO: DE 1999-19923073     19990520
INT. PATENT CLASSIF.:
           MAIN:       C08K005-34; C09D011-00; C09D011-10
      SECONDARY:       C08J007-04; C08K005-06; C08K005-42; C08K013-02;
                       C08L051-06; C09B045-04; C09D005-02; C09D017-00
BASIC ABSTRACT:
     DE   10022371 A UPAB: 20010312
     NOVELTY - Solid formulations contain:
          (a) particulate solid(s); and
          (b) water-dispersible graft copolymer of ethylenically
     unsaturated, hydrophobic monomer(s) and optionally hydrophilic monomer(s)
     on a natural protective colloid (IA) or a protective colloid (IB),
     obtained from (IA) by conversion to a derivative or thermal, enzymatic,
     oxidative, hydrolytic or bacteriological degradation, with number average
     molecular weight, Mn, over 500 g/mole.
          DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for the
     production of the formulation by mixing components (a) and (b) in water
     and optionally separating the mixture of (a) and (b).
          USE - The formulations are used for pigmenting natural or synthetic
     materials, especially water-based and other paints, coating compositions
     for fabrics and paper, paper in bulk, building materials, natural and
     synthetic polymers and printing inks, especially ink-jet inks
     (all claimed).
          ADVANTAGE - The formulations are excellent for dispersion and
     pigmentation of numerous aqueous and non-aqueous media, especially
     hydrophobic media. They are more stable than the pure solids in apolar
     organic media or, optionally with added dispersant, in polar organic and
     aqueous media.
     Dwg.0/0
FILE SEGMENT:          CPI EPI
FIELD AVAILABILITY:    AB; DCN
MANUAL CODES:          CPI: A08-M01A; A12-W12; E21-B04; E21-C13; E21-C17;
                            E25-E01; F05-A06C; F05-A06D; G01-B03; G02-A03;
                            G02-A04A; G05-F03
                       EPI: T04-G02C
TECH                 UPTX: 20010312
     TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Solids: The particulate
     solids include inorganic pigments, carbon black, metal pigments and filler
     pigments.
     TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Solids: The particulate
     solids include organic pigments, filler pigments, water-insoluble or
     hardly soluble dyes and optical brighteners.
     Preferred Pigments: Especially suitable organic colored pigments are
     1,3-bisbarbitur-5-ylidene-isoindolines of formula (I),
     1-cyanomethylene-3-barbitur-5-ylidene-isoindolines of formula (II) and
     azo-bis-barbituric acid compounds of formula (III) and the corresponding
     mono- or di-iminobarbituryl compounds (tautomeric) and their salts,
     complexes, inclusion compounds, solid solutions and intercalation
     compounds.
     R1, R2, R3, R4 = hydrogen (H), alkyl, especially 1-6 carbon (C) alkyl,
     cycloalkyl, especially 5-8 C cycloalkyl, aryl, especially optionally
     substituted phenyl, aralkyl, especially 6-10 C aryl-(1-4 C)-alkyl, e.g.
     benzyl or ethylphenyl, or hetaryl;
     A = cyanomethylene group of formula =C(R9)CN (IV);
     B = isoindoline group of formula (V) with the 1- and 3-positions linked to
     the double bonds;
     R5, R6, R7, R8 = H, halogen, especially fluorine (F), chlorine (Cl) and
     bromine (Br), 1-6 C alkyl, 1-4 C alkoxy or 6-10 C aryloxy;
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R9 = electron acceptor group;
Z1-Z10 = oxygen (O) or imino (NR10);
R10 = H or cyano (CN).

Nickel complexes of 5-(2-cyanoimino-barbitur-5-yl)-**azo** -barbituric acid or azobarbituric acid of formulae (IIIA) and (IIIB) are especially suitable.

Pigment (III) may be in the form of an inclusion or intercalation compound, in which the included compound is an (a)cyclic compound, preferably a carbonamide, sulfonamide, (substituted) urea or heterocycle, especially 2,4,6-triamino-1,3,5-triazine, acetoguanamine or benzoguanamine.

Preferred Composition: The formulation contains 10-99.9, preferably 40-99 wt.% particulate solid(s) and 0.1-90, preferably 1-60 wt.% graft **polymer.** It may also contain dispersant(s) and optionally water and/or an organic medium, in which case, it preferably contains 0.1-99 wt.% solid formulation containing (a) and (b), (c) 0.1-100 wt.% dispersant(s) with respect to (a) and (b) and (d) 0-99 wt.% water and/or organic medium.

Preferred Dispersants: Suitable dispersants include phosph(on)ates of formulae (VIA)-(VIC).

R4, R5, R6 = 1-20 C organyl;
R7 = 11-22 C (cyclo)alkyl, 7-18 C aralkyl, -R9-O-CO-R10 or -R9-COO-R10, especially a group derivative from a 4-7 C di- or tricarboxylic acid or derivative, e.g. ester, e.g. from butan-1,2,4-tricarboxylic acid, ethandicarboxylic acid or their derivatives;
R9 = (substituted) 2-4 C alkylene;
R10 = 6-22 C alkyl, cycloalkyl or alkylene;
R = H or methyl;
X+ = H or a monovalent cation.

TECHNOLOGY FOCUS - **POLYMERS** - Preferred Dispersants: Suitable dispersants include:
(i) optionally ionically-modified phenol-styrene-polyglycol ethers;
(ii) condensation products based especially on:
(a) naphthalene-, phenol-, dihydroxybenzene- and benzene-sulfonic acids; sulfonated ditolyl ether, diphenylmethane, biphenyl, hydroxybiphenyl (especially 2-hydroxybiphenyl) or terphenyl; or sulfomethylated 4,4'-dihydroxydiphenyl sulfone;
(b) formaldehyde; and
(c) phenol, cresol, 4,4'-dihydroxydiphenyl sulfone, dihydroxydiphenyl methane, urea, dimethylolurea, melamine and guanidine; in which the condensation products have an inorganic salt content less than 10, preferably less than 5, especially less than 1 wt.%; an average degree of condensation of 1-150, preferably 1-20, especially 1-5; and a residual monomer content less than 30, preferably less than 10, especially less than 5 wt.%;
(iii) oxalkylation products obtained by condensation of aromatics containing phenolic hydroxyl groups with formamide and NH-functional groups, preferably oxalkylation products of aminomethylphenols of formula (VII), which preferably is oxalkylated with propylene oxide, butylene oxide, styrene oxide, glycidol or especially ethylene oxide and optionally propylene oxide;
(iv) a water-soluble polyisocyanate adduct with hydrophilic polyether chains, preferably containing not more than 1.0 wt.% isocyanate groups, 30-99.5 wt.% ethylene oxide units in polyether chains linked by monofunctional alcohol and ionic groups in a concentration of 0-200 miliequivalents/100 g; and
(v) **polymeric** dispersants selected from homo-, co- and graft (co)**polymers** and linear and random block **copolymers** with a molecular weight of 1000-100000, preferably 2000-40000, especially

5000-30000 g/mole.
R1 = monovalent, (substituted) (cyclo)aliphatic or aromatic hydrocarbyl;
R2 = H or as R1;
R3 = H, 1-20 C alkyl, 5-7 C cyclolalkyl, phenyl, benzyl, halogen, hydroxy, 1-18 C alkoxy, carboxy or 1-18 C alkoxycarbonyl.

ABEX UPTX: 20010312

EXAMPLE - 6.4 g oxidatively degraded starch (Perfectamyl A 4692(TM)) were added to 1500 g 4.8% aqueous suspension of the **nickel** complex of **azobarbituric** acid of formula (IIIB) (prepared as described in EP-A-839879) at room temperature, with stirring at 250 rpm, and dissolved by heating to 86 degreesC; The starch was degraded further by adding 1.5 g 1% iron(II) sulfate solution and 4.2 g hydrogen peroxide (H2O2) (3% aqueous solution) and stirring at 86 degreesC for 15 minutes. Then separate streams of 9.8 g styrene, 4.9 g n-butyl acrylate, 4.9 g tert.-butyl acrylate and 5.7 g 3% H2O2 solution were added continuously in 60 minutes and the mixture was stirring at 86 degreesC was continued for 15 minutes. After cooling to room temperature, 1.0 g 10% aqueous solution of tetrasodium ethylenediaminetetraacetate (Trilon B solution(TM)) were stirred into the suspension and the pH was adjusted to 5 with glacial acetic acid. The suspension was filtered on a vacuum filter and the filter cake was dried (72 hours in vacuo at 50 degreesC). 94 g pigment formulation containing 70 g pigment (IIIB) and 24 g graft **copolymer** were obtained.

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L84  ANSWER 102 OF 105  WPIX  COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER:      1986-145800 [23]   WPIX
DOC. NO. CPI:          C1986-062340
TITLE:                 New 1 1 metal complex cpds. of benzoic acid azo
                       hydroxy pyrazole cpds. - with divalent transition
                       metal, preparation and use for colouring
                       polymer, especially fibre.
DERWENT CLASS:         A60 E21 F01 G02
INVENTOR(S):           LIENHARD, P
PATENT ASSIGNEE(S):    (CIBA) CIBA GEIGY AG
COUNTRY COUNT:         14
PATENT INFORMATION:

     PATENT NO      KIND DATE     WEEK     LA    PG MAIN IPC
     ------------------------------------------------------------
     EP 183651        A  19860604 (198623)* GE   21
        R: BE CH DE FR GB IT LI NL
     AU 8550587       A  19860605 (198630)
     JP 61133271      A  19860620 (198631)
     BR 8505977       A  19860819 (198640)
     CA 1249265       A  19890124 (198911)
     CS 8508584       A  19890411 (198920)
     US 4847365       A  19890711 (198935)
     EP 183651        B  19900523 (199021)
        R: BE CH DE FR GB IT LI NL
     DE 3577869       G  19900628 (199027)

APPLICATION DETAILS:

     PATENT NO      KIND                 APPLICATION       DATE
     -------------------------------------------------------------
     EP 183651        A                  EP 1985-810560    19851125
     JP 61133271      A                  JP 1985-266631    19851128
     US 4847365       A                  US 1988-159504    19880217
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PRIORITY APPLN. INFO: CH 1984-5711          19841130
REFERENCE PATENTS:    2.Jnl.Ref; A3...8747; DE 917632; No-SR.Pub; US 2921061
INT. PATENT CLASSIF.: C08K005-23; C09B045-14; C09B063-00; C09D017-00;
                      D06P001-10; D06P003-00
BASIC ABSTRACT:
     EP    183651 A UPAB: 19930922
     New 1:1 metal complexes (I) are derived from a divalent transition metal
     (II) and a substd. benzoic acid (2-azo-4) 5-hydroxy-3-substd.-pyrazole of
     general formula (III) where X = H, halogen, alkyl, alkoxy, aryloxy, NO2,
     acylamino, ureido, arylureido, thioureido, CNS, sulphamoyl or
     (halo)phthalimido; Y = H, halogen, alkyl or alkoxy; or X+Y+2 adjacent C
     atoms = an annellated benzene or imidazolone ring; R = alkyl,
     alkoxycarbonyl, carbamoyl or alkylcarbamoyl.
          Specifically claimed is when (I) is a Ni, Cu, Co(II) and/or Zn
     complex; X = H, halogen, 1-4C alkyl, 1-4C alkoxy, NO2, 2-6C alkanoylamino,
     opt. Cl-, 1-4C alkyl- or 1-4C alkoxy-substd. phenoxy, benzoylamino or
     phenylureido or a ureido gp.; especially H, Cl, Me, NO2, 2-5C alkanoylamino,
     opt. Cl-, 1-4C alkyl or 1-4C alkoxy-substd. phenoxy or phenylcarbamoyl;
     partic. H, Cl in the p-position to the COOH gp. or phenoxy in the
     p-position to the azo gp.; Y = H, Cl, 1-4C alkyl or 1-4C alkoxy; especially H
or
     Cl; partic. H; R = 1-4C alkyl, carbamoyl, 2-6C alkylcarbamoyl or 2-6C
     alkoxycarbonyl; especially Me or 2-3C alkoxycarbonyl; partic. Me.
          USE/ADVANTAGE - (I) are claimed for colouring high-mol. organic
     materials, pref. synthetic fibres, especially bulk colouring of polyolefin,
     polyamide or polyester fibres. They can stabilise the polymers
     against the action of light and weather, which is especially important for
     fibres, especially polypropylene. (I) are also useful in plastics, lacquers and
     inks and have good dispersibility and fastness to over-lacquering,
     migration, heat, light, weather, wet and abrasion and good strength of
     colour and good gloss.
     0/0
FILE SEGMENT:         CPI
FIELD AVAILABILITY:   AB
MANUAL CODES:         CPI: A08-A01; A08-E04; E21-B01; E21-B04; F01-D03;
                           F01-D04; F01-D05; F03-F02B; F03-F06B; F03-F07B;
                           F03-F08; F03-F16B; F03-F17; F03-F25; F03-F30;
                           G02-A03A; G02-A04B
ABEQ EP    183651 B UPAB: 19930922
     A 1:1 metal complex of divalent nickel, copper, cobalt and/or
     zinc and an azo compound of the formula (1) in which X is a
     hydrogen or chlorine atom, a methyl, nitro, 2-5C alkanoylamino group, or a
     phenoxy or benzylamino group, each unsubstituted or substituted by
     chlorine atoms or by 1-4C alkyl or 1-4C alkoxy groups, and Y is a hydrogen
     or chlorine , and R is a methyl group or a 2-3C alkoxycarbonyl group.
     sing
ABEQ US    4847365 A UPAB: 19930922
     1:1 Ni, Cu, Co (II) and/or Zn complexes of an azo cpd.
     of formula (I) are new. X is H, Cl, CH3, NO2, 2-6C alkanoylamino, phenoxy
     or phenylcarbamoyl. Pref. X is H, Cl which is para to the carboxyl gp. or
     phenoxy which is para to the aza gp.
          USE/ADVANTAGE - These metal complexes are used for the mass
     colouration of polymer fibres, esp. polyolefins, polyamides or
     polyesters. The coloured fibres have good fastness to heat, light and
     weather, as well as good rub- and wet-fastness.

L84  ANSWER 103 OF 105  WPIX  COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER:     1983-30008K [13]   WPIX
DOC. NO. CPI:         C1983-029328
TITLE:                Azo barbituric acid derivs. useful as pigments - for
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paints, **polymers**, textile printing etc..

DERWENT CLASS: A60 E23 F06 G02
INVENTOR(S): LORENZ, M
PATENT ASSIGNEE(S): (FARB) BAYER AG
COUNTRY COUNT: 7
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
EP 74515	A	19830323	(198313)*	GE	57	
R: CH DE FR GB LI						
JP 58052358	A	19830328	(198318)			
EP 74515	B	19860820	(198634)	GE		
R: CH DE FR GB LI						
DE 3272726	G	19860925	(198640)			
US 4628082	A	19861209	(198652)			

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 74515	A	EP 1982-107660	19820821
US 4628082	A	US 1985-734364	19850514

PRIORITY APPLN. INFO: DE 1981-3134725 19810902; DE 1982-3215875 19820429
REFERENCE PATENTS: FR 2121048
INT. PATENT CLASSIF.: C07D239-46; C09B027-00; C09B029-52; **C09B045-00**; C09B063-00; C09B067-20
BASIC ABSTRACT:

EP 74515 A UPAB: 19930925

Barbituric acid deriVs. of formula (I) their tautomers, salts and complexes ae new. The ings X and Y each have 1 or 2 oxo, thioxo, :NR7, -NR7R7, OR6, SR6, COOR6, CN, CONR6R7, SO2R8, -N(R6)CN, (cyclo)alkyl, aryl or aralkyl substits., the total of endo- and exo-cyclic double bonds being 3 for each ring; R6 is H, (cyclo)alkyl, aryl or aralkyl; R7 is H, (cyclo)alkyl, cyano, aryl, aralkyl, or acyl; R8 is (cyclo)alkyl, aryl or aralkyl.

R1-R4 are H, (cyclo)alkyl, aryl or aralkyl or (dotted lines) can for 5- or 6-membered ings which ay be fused to additional rings; R5 is hydroxy, NR6R7, (cyclo)alkyl, aryl or aralkyl, and all gps. R1-R8 can be substd. themselves, , n, o and p are 1 or zero when the appropriate ring N is double-bonded. Excluded are: azobarbituric acids (and salts and complexes); azouracil (and alkali salts) and uracil-5-azobarbituric acids (and alkali salts). Also new are solid solns., inclusion cpds. and intercalation cpds of (I).

(I) are useful as pigments e.g. in printing inks, distempers and paints; for mass-colouring PVC, polyolefins, etc.; for spin-colouring of cellulosics, polyesters etc. and for printing textiles or paper. They haVe high colour strength and covering power; Very good light fastness and excellent solvent fastness and tep. stability.

FILE SEGMENT: CPI
FIELD AVAILABILITY: AB
MANUAL CODES: CPI: A08-E03A2; A08-E04; E21-C13; E21-C17; F01-D; F03-F16B; F03-G; F05-A06D; G02-A03A; G02-A04B
ABEQ EP 74515 B UPAB: 19930925

Barbituric acid deriVs. of formula (I) their tautomers, salts and complexes ae new. The ings X and Y each have 1 or 2 oxo, thioxo, :NR7, -NR7R7, OR6, SR6, COOR6, CN, CONR6R7, SO2R8, -N(R6)CN, (cyclo)alkyl, aryl

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     or aralkyl substits., the total of endo- and exo-cyclic double bonds being
     3 for each ring; R6 is H, (cyclo)alkyl, aryl or aralkyl; R7 is H,
     (cyclo)alkyl, cyano, aryl, aralkyl, or acyl; R8 is (cyclo)alkyl, aryl or
     aralkyl.
          R1-R4 are H, (cyclo)alkyl, aryl or aralkyl or (dotted lines) can for
     5- or 6-membered ings which ay be fused to additional rings; R5 is
     hydroxy, NR6R7, (cyclo)alkyl, aryl or aralkyl, and all gps. R1-R8 can be
     substd. themselves, , n, o and p are 1 or zero when the appropriate ring N
     is double-bonded. Excluded are: azobarbituric acids ( and salts and
     complexes); azouracil (and alkali salts) and uracil-5-azobarbituric acids
     (and alkali salts). Also new are solid solns., inclusion cpds. and
     intercalation cpds of (I).
          (I) are useful as pigments e.g. in printing inks, distempers and
     paints; for mass-colouring PVC, polyolefins, etc.; for spin-colouring of
     cellulosics, polyesters etc. and for printing textiles or paper. They haVe
     high colour strength and covering power; Very good light fastness and
     excellent solvent fastness and tep. stability.
ABEQ US    4628082 A UPAB: 19930925
     Azobarbituric acid derivs. and their salts and complexes are new. In free
     acid form the cpds. have formula (I) in one tautomeric structure. In the
     formula, L and L1 are O or NR7 but both are not NR7. One of M and M1 is O
     and the other is O, NR7, CN or NR6-CN. R6 is H, alkyl, cycloalkyl, aryl or
     aralkyl. R7 is H, CN, alkyl, cycloalkyl, aralkyl, (1-6C alkyl) carbonyl,
     phenyl carbonyl, 1-6C alkylsulphonyl, phenylsulphonyl, carbamoyl opt.
     substd. by 1-6C alkyl, phenyl or naphthyl, or sulphamoyl opt. substd. by
     1-6C alkyl, phenyl or naphthyl; the alkyl gps. are opt. substd. by halo,
     OH, CN, NH2 or 1-6C alkoxy and the phenyl and naphthyl gps. are opt.
     substd. by halo, OH, 1-6C alkyl, 1-6C alkoxy, NH2, NO2 or CN. R1-4 are H,
     alkyl, cycloalkyl, aryl or aralkyl.
          Salts and complexes contain Li, Cr, Mg, Cd, Co, Al, Cr, Sn, Na, K,
     Ca, Sr, Ba, Zn, Fe, Ni, Cu, Mn or Pb. Azobarbituric
     acid and its salts and complexes are excluded.
          USE - The cpds. are pigments. They can form resins and can form
     inclusion or intercalation cpds. with dyestuffs to provide higher
     tinctorial strengths or different hues. Used in printing inks, paints,
     etc.  (

L84  ANSWER 104 OF 105  WPIX  COPYRIGHT 2005 THE THOMSON CORP on STN
ACCESSION NUMBER:      1983-25495K [11]   WPIX
DOC. NO. CPI:          C1983-024945
TITLE:                 Occlusion cpds., intercalation cpds. and solid solns. as
                       pigments - comprising coloured organo metallic cpd. with
                       planar crystal lattice incorporating at least one other
                       cpd..
DERWENT CLASS:         A60 E24 G01
INVENTOR(S):           LORENZ, M; SCHUNDEHUT, K H
PATENT ASSIGNEE(S):    (FARB) BAYER AG
COUNTRY COUNT:         7
PATENT INFORMATION:

     PATENT NO      KIND DATE     WEEK    LA   PG MAIN IPC
     ---------------------------------------------------------
     EP 73463        A  19830309 (198311)* GE   61
         R: CH DE FR GB LI
     DE 3215875      A  19830317 (198312)
     DE 3215876      A  19830317 (198312)
     JP 58052361     A  19830328 (198318)
     EP 73463        B  19851023 (198543)  GE
         R: CH DE FR GB LI
     DE 3267042      G  19851128 (198549)
```

US 4622391 A 19861111 (198648)
JP 02062590 B 19901226 (199104)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 73463	A	EP 1982-107774	19820825
US 4622391	A	US 1985-734377	19850515
JP 02062590	B	JP 1982-151865	19820902

PRIORITY APPLN. INFO: DE 1981-3134725 19810902; DE 1982-3215876 19820429
REFERENCE PATENTS: 1.Jnl.Ref; DE 1619622; FR 2121048; JP 50064320
INT. PATENT CLASSIF.: C06P001-04; C09B027-00; C09B029-03; **C09B045-00**; C09B067-22
BASIC ABSTRACT:

EP 73463 A UPAB: 19930925

Occlusion cpds., intercalation cpds. and solid solns. are claimed comprising a coloured organometallic cpd. (I) having a layer shaped crystal lattice in which the bonding within the layer is essentially by way of hydrogen bridges and/or metal ions and containing another occluded cpd., with the exception of a compsn. comprising 45-82 weight% of an **azobarbituric** acid-**nickel**-1:1 complex (II), 3-15 weight% benzenesulphonamide, 5-20 weight% Ni acetate and 10-20 weight% water.

Pref. (I) is a metal salt or metal complex, especially a Ni salt or complex of a cpd. having tautomeric structures (III) in which X and Y are rings which may each carry one or two substituents chosen from =O, =S, =NR7, -NR6R7, -OR6, -SR6, -COOR6, -CN, -CONR6R7, -SO2R8, -N(R6)-CN, alkyl, cycloalkyl, aryl, or aralkyl, and the sum of the endo- and exocyclic double bonds for each ring X and Y is 3; R6 is H, alkyl, cycloalkyl, aryl or aralkyl; R7 is H, CN, alkyl, cycloalkyl, aryl, aralkyl or acyl; R8 is alkyl, cycloalkyl, aryl or aralkyl; R1, R2, R3 and R4 are H, alkyl, cycloalkyl, aryl, or aralkyl, or (as shown by dotted lines in (III)) may form 5 or 6 membered rings to which further rings may be condensed; and R5 is -OH, -NR6R7, alkyl, cycloalkyl, aryl or aralkyl; R1-R8 CH-bond containing gps. may be substd.; and m,n,o and p are 1 or (if the ring N carries a double bond as shown by dotted lines) zero.

The prods. may contain occluded cyclic or acyclic organic cpds., carboxylic acid amides, sulphonamides, surface active cpds., especially tensides, natural resins and rosin acids, **polymers**, water-soluble **polymers**, dyes or pigments. The prods. are especially useful as pigments with improved properties for use in paints, printing inks, **polymers**, spinning solns., etc. The pigments have excellent heat resistance and light and weather resistance and by choosing the occluded cpd., properties such as good dispersibility, gloss, brilliance, colour tone, etc., can be influenced.

FILE SEGMENT: CPI
FIELD AVAILABILITY: AB
MANUAL CODES: CPI: A08-E04; E21-C13; E21-C17; G02-A03A; G02-A04B
ABEQ EP 73463 B UPAB: 19930925

Inclusion cpds. intercalation compounds and solid solutions, characterised in that a coloured organic metal compound which forms a crystal lattice with a layer structure in which the bonding within a layer takes place essentially via hydrogen bridges and/or metal ions contains at least one other included compound, except for one composition of matter which consists of 45 to 82% by weight of **azobarbituric** acid/ **nickel** 1:1 complex, 3 to 15% by weight of benzene-sulphonamide, 5 to 20% by weight of nickel acetate and 10 to 20% by weight of water.

ABEQ US 4622391 A UPAB: 19930925

Inclusion cpd., intercalation cpd. or solid soln. which is a Ni salt or Ni complex of a cpd. which, in one of its tautomeric forms, corresponds to the formula (I) in which rings X and Y are opt. substd. by 1 or 2 =O, =S, =NR7, -NR6R7, -OR6, -SR6, -COOR6, -CN, -CONR6R7, -SO2R8, -N(R6)CN, alkyl, cycloalkyl, aryl or aralkyl substits., the total number of endocyclic and exocyclic double bonds for each of rings X and Y being 3; R6 is H, alkyl, cycloalkyl, aryl or aralkyl; R7 is H, CN, alkyl, cycloalkyl, aryl, aralkyl, 1-6C alkyl-carbonyl, phenylcarbonyl, 1-6C alkylsulphonyl, phenylsulphonyl, opt. substd. carbamoyl, opt. substd. sulphamoyl or opt. substd. guanyl; R8 is alkyl, cycloalkyl, aryl or aralkyl; R1, R2, R3 and R4 are H, alkyl, cycloalkyl, aryl or aralkyl or, as indicated by the broken lines in the formula, form a triazole, imidazole, benzimidazole, pyrimidine or quinazoline ring, or a triazole, imidazole, benzimidazole, pyrimidine or quinazoline ring to which further rings are fused; R5 is OH, -NR6R7, alkyl, cycloalkyl, aryl or aralkyl; and m, n, o and p are each 1 or, where double bonds extend from the ring N-atoms, as indicated by the dotted lines in the formula, are each 0 or 1 contg. at least one other included cpd., except for one compsn. comprising 45-82% by wt. of **azobarbituric** acid/**nickel** 1:1 complex, 3-15% by wt. of benzene-sulphonamide, 5-20% by wt. of nickel acetate and 10-20% by wt. of water.

USE - Cpd. is used as pigment for all pigment applications.

L84 ANSWER 105 OF 105 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

ACCESSION NUMBER: 1977-05586Y [04] WPIX

TITLE: Bulk dyeing of nonreducing thermoplastic resins - using magnesium, zinc cadium or **nickel** salts of sulphonic acids containing **azo** gp. and hydroxy napthalene.

DERWENT CLASS: A60 E21 F01

PATENT ASSIGNEE(S): (CIBA) CIBA GEIGY AG

COUNTRY COUNT: 9

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
BE 843712	A	19770103	(197704)*			
NL 7606996	A	19770106	(197704)			
DE 2629639	A	19770127	(197705)			
JP 52009047	A	19770124	(197710)			
FR 2316276	A	19770304	(197715)			
US 4083687	A	19780411	(197822)			
CH 601389	A	19780714	(197833)			
GB 1521577	A	19780816	(197833)			
CA 1083287	A	19800805	(198034)			
JP 59016570	B	19840416	(198419)			
DE 2629639	C	19851031	(198545)			

PRIORITY APPLN. INFO: CH 1975-8743 19750704

INT. PATENT CLASSIF.: C08J003-20; C08K005-00; C08L023-00; C09B029-10; **C09B045-00**; D06P001-10; D06P003-00

BASIC ABSTRACT:

BE 843712 A UPAB: 19930901

The dyes are Mg, Zn, Cd or Ni salts (I) of acids of formula (I), where A is phenyl or naphthyl opt. substd. by halogen, 1-4C alkyl or alkoxy, or CF3; X is H or COOH; and n 1 or 2.

Used especially for bulk dyeing of polyolefins but also for PVC, polystyrene, ABS **copolymers**, polyesters etc. Unlike Ca, Sn or Ba salts of (I) the above salts are stable to heat. The Mg salts non-toxic and the Cd salts fast to light. The salts are also easily dispersed and non-migrating.

FILE SEGMENT: CPI
FIELD AVAILABILITY: AB
MANUAL CODES: CPI: A08-E04; E21-C10; E21-C11; E21-C16; F01-D; F03-F16

```
=> d his l83

     (FILE 'HCAPLUS, MEDLINE, BIOSIS, PASCAL, APOLLIT, JICST-EPLUS, EMBASE,
     SCISEARCH, WPIX, CONF, CONFSCI' ENTERED AT 15:19:10 ON 27 JUL 2005)
L83            13 S L81 AND L82

=> d que l83
L79         2617 SEA WEISS, T?/AU
L80         1246 DUP REM L79 (1371 DUPLICATES REMOVED)
L81           29 SEA L80 AND ?CATALY?
L82           42 SEA L80 AND ?POLYMER?
L83           13 SEA L81 AND L82


=> d ibib ed ab l83
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y



L83  ANSWER 1 OF 13  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         2005:191022  HCAPLUS
TITLE:                    Acrylonitrile insertion into Pd methyl bonds
AUTHOR(S):                Groux, Laurent F.; Weiss, Thomas; Piers,
                          Warren E.
CORPORATE SOURCE:         Department of Chemistry, University of Calgary,
                          Calgary, AB, T2N 1N4, Can.
SOURCE:                   Abstracts of Papers, 229th ACS National Meeting, San
                          Diego, CA, United States, March 13-17, 2005 (2005),
                          INOR-634.  American Chemical Society: Washington, D.
                          C.
                          CODEN: 69GQMP
DOCUMENT TYPE:            Conference; Meeting Abstract
LANGUAGE:                 English
ED   Entered STN:  06 Mar 2005
AB   Homogeneous, single site homo- and copolymn. of polar monomers
     by transitions metal remains a significant challenge in polymerization
     catalysis.  Our chosen monomer, acrylonitrile (AN), has been
     reacted with new Pd catalysts, one of them being specially
     designed to favor the π- vs N-bonding of AN by the addition of an anionic
     BF3- group on the ligand framework (complex c).  Kinetic studies showed
     the rapid N-coordination of AN at low temperature (-60°C).  Above
     -30°C, isomerization to the π-bound AN species (not observed)
     followed by 2,1-insertion into the Pd-Me bond take place.  Activation
     parameters of ΔH- = 14.4(5) kcal mol-1 and ΔS- = -19(5) eu
     were obtained for the insertion of AN in complex b.  The presence of the
     BF3- (complex c) improved the overall rate of insertion by a factor of two
     but did not prevent the rapid oligomerization of the insertion products
     through the cyano group to form stable, and unreactive, dimers and
     trimers.


=> d ibib ed ab l83 2-
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y


YOU HAVE REQUESTED DATA FROM 12 ANSWERS - CONTINUE? Y/(N):y

L83  ANSWER 2 OF 13  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         2005:128437  HCAPLUS
DOCUMENT NUMBER:          142:392510
```

TITLE: The Exploration of Neutral Azoligand-Based Grubbs Type Palladium(II) Complex as Potential **Catalyst** for the **Copolymerization** of Ethylene with Acrylonitrile: A Theoretical Study Based on Density Functional Theory

AUTHOR(S): Yang, Sheng-Yong; Szabo, Miklos J.; Michalak, Artur; **Weiss, Thomas**; Piers, Warren E.; Jordan, Richard F.; Ziegler, Tom

CORPORATE SOURCE: Department of Chemistry, University of Calgary, Calgary, AB, T2N 1N4, Can.

SOURCE: Organometallics (2005), 24(6), 1242-1251
CODEN: ORGND7; ISSN: 0276-7333

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 15 Feb 2005

AB A combined quantum-mech. (QM) and mol.-mech. (MM) method was used to explore the potential of neutral azoligand-based Grubbs type Pd(II) complexes as **catalysts** for ethylene-acrylonitrile **copolymn.** The 1st part of the study includes complexation of the monomers to the **catalyst**, the 1st insertion step, and isomerization of the 1st insertion product I. The π-complexation energies of acrylonitrile and ethylene are comparable, but the acrylonitrile insertion has a lower barrier over ethylene insertion by 5 kcal/mol in the 1st step. The leading product I might conduct isomerizations with a lower barrier to form different chelate structures. However, the most stable isomers have the CN group in the α-position. The 2nd part explores the further role of the kinetic insertion product I. 1 Readily can complex another ethylene or acrylonitrile monomer. Unfortunately, it is even more favorable for I to coordinate its Pd(II) center to a N atom on a α-cyano-alkyl group of another I complex, leading to inert oligomers of 1 that do not further react with ethylene or acrylonitrile. Trimers of I are preferred over dimers because they allow for an optimal linear Pd-NC bonding mode with an angle of .apprx.180°. The preference for Pd coordination to the N on a α-cyano-alkyl group over N-coordination to acrylonitrile stems from the fact that the acrylonitrile N is less electron rich due to donation to the π* orbital of the olefinic bond.

REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 3 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:64316 HCAPLUS

DOCUMENT NUMBER: 142:336672

TITLE: Insertion of Acrylonitrile into Palladium Methyl Bonds in Neutral and Anionic Pd(II) Complexes

AUTHOR(S): Groux, Laurent F.; **Weiss, Thomas**; Reddy, Dastigiri N.; Chase, Preston A.; Piers, Warren E.; Ziegler, Tom; Parvez, Masood; Benet-Buchholz, Jordi

CORPORATE SOURCE: Department of Chemistry, University of Calgary, Calgary, AB, T2N 1N4, Can.

SOURCE: Journal of the American Chemical Society (2005), 127(6), 1854-1869
CODEN: JACSAT; ISSN: 0002-7863

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 25 Jan 2005

AB The reactions of a series of Pd(II) Me compds. of general formula LPd(NCCH3)CH3, where L is a bulky phenoxydiazene or phenoxyaldimine ligand with the polar olefin acrylonitrile (AN), are reported. The compds. react with an excess of AN to give the products of 2,1 insertion into the Pd-Me bond, yielding dimers and/or trimers which feature bridging α-cyano groups. The reactions were studied by low temperature 1H NMR spectroscopy, revealing an initial formation of compds. featuring N-bound AN, which isomerized to an (unobserved) π-bound species that rapidly underwent 2,1 insertion into the Pd-Me bond. Intermediate oligomeric complexes retaining a Pd-Me function were observed at low [AN] in these reactions. Under pseudo first-order conditions, kobs values of 8.5 + 10-5 to 2.68 + 10-3 M-1 (-22 °C to 10 °C, 100 equiv of AN) and activation parameters of ΔH.dbldag. = 14.4(5) kcal mol-1 and ΔS.dbldag. = -19(5) eu were obtained in one case. Comparison of the overall rates of insertion between two LPd(NCCH3)CH3, differing in the overall charge on the supporting ligand L, showed that the complex bearing a neg. charged ligand reacts with AN twice as fast as one with no anionic charge. The rates of insertion in both of these complexes are significantly faster than reported rates for analogous reactions in cationic Pd(II) derivs., indicating that increasing the neg. charge on the complex enhances the rate of AN insertion. These results provide fundamental mechanistic insights into a crucial reaction for incorporation of polar comonomers into alpha olefins via a coordination **polymn**. mechanism.

REFERENCE COUNT: 94 THERE ARE 94 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 4 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:810953 HCAPLUS
DOCUMENT NUMBER: 142:23370
TITLE: Polar **Copolymerization** by a Palladium-Diimine-Based **Catalyst.** Influence of the **Catalyst** Charge and Polar Substituent on **Catalyst** Poisoning and **Polymerization** Activity. A Density Functional Theory Study
AUTHOR(S): Szabo, Miklos J.; Jordan, Richard F.; Michalak, Artur; Piers, Warren E.; **Weiss, Thomas**; Yang, Sheng-Yong; Ziegler, Tom
CORPORATE SOURCE: Department of Chemistry, University of Calgary, Calgary, AB, T2N 1N4, Can.
SOURCE: Organometallics (2004), 23(23), 5565-5572
CODEN: ORGND7; ISSN: 0276-7333
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 06 Oct 2004

AB **Copolymn.** of ethylene with electroneg. alkenes **catalyzed** by palladium diimine complex was explored by DFT calcns. Combined gradient-corrected d. functional theory and mol. mechanics (QM/MM) was used to investigate the **copolymn.** of ethylene with the CH2:CHX (2a-f; X = H, Me, CN, COOMe, OCOMe, Cl). The cationic complex [(ArN:CR2CR3:NAr-κN,κN')PdMe]+ (Ar = 2,6-iPr2C6H3, 1, R2 = H) and its neutral and anionic analogs (R2 = BH3-, R3 = H and R2 = R3 = BH3-, resp.) were used as **catalysts.** The consecutive insertion steps of CH2:CHX into the Pd-Me bond and of ethylene into the Pd-C(X)HCH2CH3 bond were investigated. Focus was put on the role of the X functional groups and the effect of the cationic, neutral, and anionic environments on the Pd(II)-diimine system. Calcns. were performed on the CH2:CHX monomers, model **catalysts**, precursor π-complexes, and σ-complexes of the monomers, as well as the chelate and H-agostic insertion products. The transition state of the insertion reaction and the corresponding activation energy was determined for both investigated insertion steps. The results show that the X group has only a minor effect on the insertion of the $CH_2{:}CHX$ monomers into the Pd-CH_3 bond. On the other hand, the barrier for insertion of ethylene into the Pd-CHXR bond revealed an increase with the electron-withdrawing ability of X. The application of neutral and anionic **catalysts** leads to a preference for π-complexation over σ-complexation of the polar monomers. Unfortunately, for an anionic model system the barriers for the first and second insertion are significantly increased for ethylene, whereas the first insertion barrier for the polar monomers only is moderately increased. Thus, while anionic **catalysts** are highly tolerant toward polar monomers, they are nearly inactive toward ethylene insertion.

REFERENCE COUNT: 84 THERE ARE 84 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 5 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:753180 HCAPLUS
DOCUMENT NUMBER: 141:261201
TITLE: Method of preparing of olefin **polymerization catalyst** containing azo group
INVENTOR(S): **Weiss, Thomas**
PATENT ASSIGNEE(S): Bayer A.-G., Germany
SOURCE: Eur. Pat. Appl., 25 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
EP 1457502	A1	20040915	EP 2004-4501		20040227
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK					
DE 10310289	A1	20040923	DE 2003-10310289		20030310
US 2004181018	A1	20040916	US 2004-793512		20040304
CA 2459658	AA	20040910	CA 2004-2459658		20040305
JP 2004269889	A2	20040930	JP 2004-63842		20040308
PRIORITY APPLN. INFO.:			DE 2003-10310289	A	20030310

OTHER SOURCE(S): MARPAT 141:261201
ED Entered STN: 16 Sep 2004
AB Azo complexes of 4-12 B group metals used as **catalysts** for (co) **polymerization** of olefins are prepared by mixing solns. of azo compds. I (Nu1 and Nu2 = O, S, Se, PRa, NRa or COO, Ra = H or optionally substituted alkyl or aryl group, J = A group 1-2 element, R, R1, R2 and R3 = H, halogen, optionally substituted C1-8 alkyl, C2-8 alkenyl, C3-12 cycloalkyl, C7-13 arylalkyl or C6-14 aryl, R1R2 and R2R3 can form rings) and M(L1)w(L2)y(L3)z (M = a 4-12 side group metal, L1 = neutral ligand, such as phosphines, amines, tetraarylalkyl ethylenediamine, ethers, alcs., derivs. of pyridine, CO, C1-12 alkyl nitrile, C6-14 aryl nitrile, L2 and L3 = anionic ligands, such as halide-, amide-, C1-6 alkyl-, allyl-, methallyl-, benzyl- or aryl-anions, w, y and z = 0-3) in polar solvents. Thus, mixing a solution of II (R1 = R2 = tert-Bu, R3 = R5 = iso-Pr, R4 = H) in a mixture of toluene/chlorobenzene with a solution of bis(1,5-cyclooctadiene)nickel in toluene gave a **catalyst** used in **polymerization** of ethylene in autoclave at 8 bar and 30-60° in the presence of a mixture of BF_3/diethyl ether as activator..

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L83  ANSWER 6 OF 13  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:        2004:719300  HCAPLUS
DOCUMENT NUMBER:         141:395629
TITLE:                   Reactions of Zirconocene 2-Vinylpyridine Complexes
                         with Diisobutylaluminum Hydride and Fluoride
AUTHOR(S):               Arndt, Perdita; Spannenberg, Anke; Baumann, Wolfgang;
                         Burlakov, Vladimir V.; Rosenthal, Uwe; Becke, Sigurd;
                         Weiss, Thomas
CORPORATE SOURCE:        Leibniz-Institut fuer Organische Katalyse,
                         Universitaet Rostock e. V., Rostock, D-18055, Germany
SOURCE:                  Organometallics (2004), 23(20), 4792-4795
                         CODEN: ORGND7; ISSN: 0276-7333
PUBLISHER:               American Chemical Society
DOCUMENT TYPE:           Journal
LANGUAGE:                English
OTHER SOURCE(S):         CASREACT 141:395629
ED   Entered STN:  03 Sep 2004
AB   Reactions of the zirconocene 2-vinylpyridine complex Cp2Zr(2-vipy) (1)
     with iBu2AlH and iBu2AlF produced the isostructural complexes
     [Cp2Zr(μ-η1:η2-2-CH2CH-C5H4N)(μ-H)][iBu2Al] (3) and
     [Cp2Zr(μ-η1:η2-2-CH2CH-C5H4N)(μ-F)][iBu2Al] (5).  The
     complexes served as models for the transfer of fluorine from zirconium to
     aluminum (Zr-F with Al-H to Zr-H and Al-F) found in reaction of
     rac-(ebthi)ZrF2 (ebthi = bis(tetrahydroindenyl)ethane) with iBu2AlH
     forming the dimeric complex [rac-(ebthi)ZrH(μ-H)]2 (6).  The compds.
     are important for obtaining an understanding of the activation of
     zirconocene fluoro complexes by iBu3Al and of the role of iBu2AlH in
     activation processes for the catalytic polymerization of
     olefins.  The x-ray crystal structures of complexes 3, 5, and 6 are
     presented and discussed.
REFERENCE COUNT:         57    THERE ARE 57 CITED REFERENCES AVAILABLE FOR THIS
                               RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83  ANSWER 7 OF 13  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:        2004:631256  HCAPLUS
DOCUMENT NUMBER:         141:174614
TITLE:                   Monometallic azo complexes of late transition metals
                         for the polymerization of olefins
INVENTOR(S):             Weiss, Thomas
PATENT ASSIGNEE(S):      Bayer AG, Germany
SOURCE:                  Ger. Offen., 25 pp.
                         CODEN: GWXXBX
DOCUMENT TYPE:           Patent
LANGUAGE:                German
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

     PATENT NO.          KIND  DATE        APPLICATION NO.        DATE
     ---------------     ----  --------    -------------------    --------
     DE 10304158          A1   20040805    DE 2003-10304158       20030203
     EP 1454926           A1   20040908    EP 2004-1164           20040121
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
     CA 2456518           AA   20040803    CA 2004-2456518        20040130
     US 2004186007        A1   20040923    US 2004-768291         20040130
     JP 2004238395        A2   20040826    JP 2004-25253          20040202
PRIORITY APPLN. INFO.:                     DE 2003-10304158    A  20030203
OTHER SOURCE(S):         MARPAT 141:174614
ED   Entered STN:  06 Aug 2004
AB   The title azo complexes have the formula I, where Nu1 = O, S, Se, PRa, NRa
```

or COO; Ra = H, alkyl or aryl group; R, R1, R2, R3 and R4 = H, halogen, substituted or unsubstituted C1-8 alkyl, C2-8 alkenyl, C3-12 cycloalkyl, C7-13 arylalkyl or C6-14 aryl group; M1 = a group 4-12 element, such as Ti, Zr, Cr, V, Fe, Co, Ni, Pd, Cu or Zn; L1 = a neutral ligand, such as PPh3; L2 = an anionic ligand, such as Me, Ph and z = 1-2. The complexes can be used as **catalysts** for (co)**polymerization** of olefins and polar olefins.

L83 ANSWER 8 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:591544 HCAPLUS
DOCUMENT NUMBER: 139:277192
TITLE: Is the **polymerization** of linear α-olefins by transition-metal carbene complexes a viable process? A theoretical study based on density functional theory
AUTHOR(S): Szabo, Miklos J.; Berke, Heinz; **Weiss, Thomas** ; Ziegler, Tom
CORPORATE SOURCE: Department of Chemistry, University of Calgary, Calgary, AB, T2N 1N4, Can.
SOURCE: Organometallics (2003), 22(18), 3671-3677
CODEN: ORGND7; ISSN: 0276-7333
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 03 Aug 2003

AB Gradient-corrected d. functional theory has been used to study the mechanism of α-olefin **polymerization catalyzed** by transition-metal carbene complexes. Taking the [CH2:Re(NO)2(PMe3)]+ complex as an example, we investigated the possible elementary steps of the polyethylene formation. This "carbene-to-metallacycle" style mechanism based on a pure carbene intermediate starts with the coordination of the ethylene. Then ethylene reacts with the carbene complex by a [2 + 2] addition Metallacyclobutane decomposition to a new carbene complex takes place by an α-hydrogen transfer reaction. We have also investigated the possible side reactions for the metallacyclobutane decomposition by metathesis reaction, cyclization, and β-hydride transfer reactions. Calcns. have been performed on the monomer and carbene complexes, on the possible intermediates, ethylene π-complexes, metallacyclobutanes, cyclopropyl complexes, cyclopropyl hydride complexes, propylidene complexes, propene π-complexes, allyl-hydride intermediates, and transition states. The results show that when the [CH2:Re(NO)2(PMe3)]+ complex is used as a **catalyst**, the β-hydride transfer is both kinetically and thermodynamically favored over the α-hydride transfer reaction; therefore, ethylene **polymerization** is not viable. Modifying the **catalyst** by changing the metal center does not change the preference for the β-elimination products. However, the application of strongly electron donating ligands can make the metal center sufficiently electron rich to stabilize the new propylidene ligand over the formation of an olefin π-complex.

REFERENCE COUNT: 78 THERE ARE 78 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 9 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:944509 HCAPLUS
DOCUMENT NUMBER: 138:25075
TITLE: Olefin **polymerization catalysts** based on 1,3-disubstituted 2-position bridged indenyl transition metal complexes
INVENTOR(S): Becke, Sigurd; **Weiss, Thomas**; Lang, Heinrich
PATENT ASSIGNEE(S): Bayer AG, Germany

SOURCE: Eur. Pat. Appl., 31 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1264835	A1	20021211	EP 2002-11576	20020527
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
DE 10127926	A1	20021212	DE 2001-10127926	20010608
US 2003027954	A1	20030206	US 2002-162828	20020604
US 6723676	B2	20040420		
CA 2389407	AA	20021208	CA 2002-2389407	20020605
JP 2003048893	A2	20030221	JP 2002-165982	20020606

PRIORITY APPLN. INFO.: DE 2001-10127926 A 20010608
OTHER SOURCE(S): MARPAT 138:25075
ED Entered STN: 13 Dec 2002
AB Transition metal complexes of indene derivs. of specified structure I are synthesized and used as **catalysts** for **polymerization** of α-olefins, where A is a benzene or tetrahydrocyclohexyl ring, Q1, Q2 and Q3 are same or different and can be H, C1-4 alkyl, C6-14 aryl, C7-10 aralkyl, C1-4 alkoxy or C1-4 alkylthio, phenoxy, phenylthio, dialkylamino, arylalkylamino, diarylamino, dibenzylamino, trialkylsilyl, dialkylboranyl, phenylalkylboranyl, diphenylboranyl, dialkylphosphoryl, diphenylphosphoryl or phenylalkylphosphoranyl, M = Group 4-6 metals, X = an anion, n = 0-4, m = 0-4, Y = a divalent bridging group selected from C(R1R2), Si(R1R2), Ge(R1R2), C(R1R2)C(R3R4), C(R1R2)Si(R3R4) or Si(R1R2)Si(R3R4), Z = N(R5), P(R6), O or S (R1-R6 = H, halogen, C1-10 alkyl, C5-8 cycloalkyl, C6-14 aryl or C7-10 aralkyl). The **catalyst** can be used to produce high mol. weight α-olefin (co) **polymer**, such as Ethylene/5-ethylidene-2-norbornene/propylene **tercopolymer** or EPDM rubber.
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 10 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:100957 HCAPLUS
DOCUMENT NUMBER: 136:369784
TITLE: A 2-indenyl-amido-bridged titanium complex with Cs-symmetry
AUTHOR(S): **Weiss, Thomas**; Becke, Sigurd; Sachse, Helga; Rheinwald, Gerd; Lang, Heinrich
CORPORATE SOURCE: Technische Universitat Chemnitz, Institut fur Chemie, Fakultat fur Naturwis-Senschaften, Lehrstuhl fur Anorganische Chemie, Chemnitz, D-09111, Germany
SOURCE: Inorganic Chemistry Communications (2002), 5(2), 159-162
CODEN: ICCOFP; ISSN: 1387-7003
PUBLISHER: Elsevier Science S.A.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 136:369784
ED Entered STN: 06 Feb 2002
AB A novel Cs-sym. constrained Ti(IV) indenylsilyamido bridged complex I and the preparation thereof is described; the solid-state structure and the use of I as a single site **catalyst** in the **copolymn.** of ethene and propene is reported.

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83 ANSWER 11 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:559587 HCAPLUS
DOCUMENT NUMBER: 135:137848
TITLE: Organometallic compounds with annelated indenyl ligands as **polymerization catalysts**
INVENTOR(S): Becke, Sigurd; Lang, Heinrich; **Weiss, Thomas**
PATENT ASSIGNEE(S): Bayer A.-G., Germany
SOURCE: Eur. Pat. Appl., 21 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1120424	A2	20010801	EP 2001-100145	20010116
EP 1120424	A3	20021016		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
DE 10003581	A1	20010802	DE 2000-10003581	20000128
US 2001014725	A1	20010816	US 2001-767491	20010123
US 6613713	B2	20030902		
CA 2332165	AA	20010728	CA 2001-2332165	20010125
JP 2001253895	A2	20010918	JP 2001-20072	20010129

PRIORITY APPLN. INFO.: DE 2000-10003581 A 20000128
OTHER SOURCE(S): MARPAT 135:137848
ED Entered STN: 03 Aug 2001

AB Transition metal complexes with annelated indenyl compound ligands of specified structure are **catalysts** for the **polymerization** of olefins and diolefins. Stirring 0.5 mol indan with 0.5 mol acryloyl chloride and AlCl3 in CH2Cl2 at 0° and then at 25° gave 24% 5,6,7-tetrahydroindacen-1-one (I), reduction of which with NaBH4 in Et2O gave the corresponding alc., refluxing of which with p-MeC6H4SO3H in C6H6 gave 90% (based on I) 5,6,7-tetrahydroindacene, bromination of which in Et2O gave 77% 1,2-dibromo derivative, dehydrobromination of which in refluxing tetralin gave 14% 2-bromo-5,6,7-tetrahydroindacen. Grignard reaction of this compound with Me2SiCl2 gave 97% chlorodimethyl(5,6,7-tetrahydroindenyl)silane, reaction of which with tert-BuNH2 in Et2O at 0° gave 94% tert-butylamino-2-(5,6,7-tetrahydroindacenyl)dimethylsilane, reaction of which with BuLi and then TiCl3.3THF in pentane at -78 to +25° gave 60% tert-butylamino-2-(5,6,7-tetrahydroindacenyldimethylsilyl)titanium dichloride. Use of this compound in the **polymerization** of C3H6 is exemplified.

L83 ANSWER 12 OF 13 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:579550 HCAPLUS
DOCUMENT NUMBER: 131:200278
TITLE: **Catalysts** for preparation of atactic propylene (co)**polymers**
INVENTOR(S): Lang, Heinrich; **Weiss, Thomas**; Becke, Sigurd
PATENT ASSIGNEE(S): Bayer Aktiengesellschaft, Germany
SOURCE: Eur. Pat. Appl., 19 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1

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PATENT INFORMATION:

     PATENT NO.          KIND   DATE          APPLICATION NO.        DATE
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     EP 940412            A1    19990908      EP 1999-103233         19990219
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
     DE 19809160          A1    19990909      DE 1998-19809160       19980304
     CA 2263176           AA    19990904      CA 1999-2263176        19990301
     JP 11292934          A2    19991026      JP 1999-54218          19990302
PRIORITY APPLN. INFO.:                        DE 1998-19809160    A  19980304
OTHER SOURCE(S):         MARPAT 131:200278
ED   Entered STN:  15 Sep 1999
AB   The title catalysts, giving amorphous, highly atactic
     polymers, contain transition metal compds. bearing 2-indenyl
     compds. of specified structure as ligands.  Stirring 23 mmol
     chloro-2-indenyldimethylsilane (prepared in 95% yield from 2-bromoindene 20,
     Mg 30, and Me2SiCl2 40 mmol in THF) with 22 mmol indenyllithium in Et2O at
     25° for 2 h gave 47% 1-indenyl-2-indenyldimethylsilane, stirring of
     which (3.5 mmol) with 7 mmol BuLi in THF-Et2O-hexane at 25° for 15
     h and stirring the resulting Li salt with 3.5 mmol ZrCl4 in PhMe at
     25° for 15 h gave 96% (1-indenyl-2-indenyldimethylsilyl)zirconium
     dichloride (I).  Stirring 10 µmol I with 5 mL 10% Me aluminoxane and
     C3H6 in PhMe at 40°/1.1 bar for 1 h gave 12.2 g amorphous, solid
     polypropylene.
REFERENCE COUNT:         4      THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS
                                RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L83  ANSWER 13 OF 13  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:        1999:579549  HCAPLUS
DOCUMENT NUMBER:         131:200277
TITLE:                   Metalorganic compounds as catalysts for
                         polymerization of olefins
INVENTOR(S):             Lang, Heinrich; Weiss, Thomas; Becke, Sigurd
PATENT ASSIGNEE(S):      Bayer Aktiengesellschaft, Germany
SOURCE:                  Eur. Pat. Appl., 24 pp.
                         CODEN: EPXXDW
DOCUMENT TYPE:           Patent
LANGUAGE:                German
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE          APPLICATION NO.        DATE
     ---------------     ----   --------      --------------------   --------
     EP 940408            A1    19990908      EP 1999-103231         19990219
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
     DE 19809159          A1    19990909      DE 1998-19809159       19980304
     US 6248912           B1    20010619      US 1999-258557         19990226
     CA 2263185           AA    19990904      CA 1999-2263185        19990301
     JP 11315089          A2    19991116      JP 1999-53249          19990301
PRIORITY APPLN. INFO.:                        DE 1998-19809159    A  19980304
OTHER SOURCE(S):         MARPAT 131:200277
ED   Entered STN:  15 Sep 1999
AB   Transition metal compds. of indene derivs. of specified structure are
     prepared and used as catalysts for polymerization of
     α-olefins, dienes, and cycloalka(di)enes.  Stirring 23 mmol
     chloro-2-indenyldimethylsilane (prepared in 95% yield from 2-bromoindene, Mg
     and Me2SiCl2 in THF) with 22 mmol indenyllithium in Et2O at 25° for
     2 h and heating to reflux gave 47% 1-indenyl-2-indenyldimethylsilane,
```

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     reaction of which (3.5 mmol) with 7 mmol BuLi in THF-Et2O and then with
     3.5 mmol ZrCl4 in PhMe gave 96% (1-indenyl-2-indenyldimethylsilyl)zirconiu
     m dichloride (I).  Stirring 1 μmol I (preactivated with Me aluminoxane)
     with 5 mL Me aluminoxane and C2H4 in PhMe at 40°/7 bar for 15 min
     gave 13.2 g polyethylene.
REFERENCE COUNT:          3     THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS
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FILE LAST UPDATED: 26 Jul 2005  (20050726/ED)

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 RLOAD at an arrow promt (=>).  See also:

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    http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

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FILE COVERS 1971 TO PATENT PUBLICATION DATE: 26 Jul 2005 (20050726/PD)
FILE LAST UPDATED: 26 Jul 2005 (20050726/ED)
HIGHEST GRANTED PATENT NUMBER: US6922846
HIGHEST APPLICATION PUBLICATION NUMBER: US2005160510
CA INDEXING IS CURRENT THROUGH 26 Jul 2005 (20050726/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 26 Jul 2005 (20050726/PD)
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FILE COVERS 2001 TO PUBLICATION DATE: 26 Jul 2005 (20050726/PD)
FILE LAST UPDATED: 26 Jul 2005 (20050726/ED)
HIGHEST GRANTED PATENT NUMBER: US2005131306
HIGHEST APPLICATION PUBLICATION NUMBER: US2005160493
CA INDEXING IS CURRENT THROUGH 26 Jul 2005 (20050726/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 26 Jul 2005 (20050726/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED:  Jun 2005
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2005

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a complete list of publications that may be searched in standard
search fields, e.g., /PN, /PK, etc.

USPATFULL and USPAT2 can be accessed and searched together through
the new cluster USPATALL.  Type FILE USPATALL to enter this cluster.

Use USPATALL when searching terms such as patent assignees,
classifications, or claims, that may potentially change from the
earliest to the latest publication.

=> fil caold
FILE 'CAOLD' ENTERED AT 15:24:02 ON 27 JUL 2005
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FILE COVERS 1907-1966
FILE LAST UPDATED:  01 May 1997 (19970501/UP)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.  Title keywords, authors, patent
  assignees, and patent information, e.g., patent numbers, are
  now searchable from 1907-1966.  TIFF images of CA abstracts
  printed between 1907-1966 are available in the PAGE
```

```
  display formats.

  New CAS Information Use Policies, enter HELP USAGETERMS for details.

  This file supports REG1stRY for direct browsing and searching of
  all substance data from the REGISTRY file.  Enter HELP FIRST for
  more information.

=> fil toxcenter
FILE 'TOXCENTER' ENTERED AT 15:24:06 ON 27 JUL 2005
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FILE COVERS 1907 TO 19 Jul 2005 (20050719/ED)

This file contains CAS Registry Numbers for easy and accurate substance
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New CAS Information Use Policies, enter HELP USAGETERMS for details.

TOXCENTER has been enhanced with new files segments and search fields.
See HELP CONTENT for more information.

TOXCENTER thesauri in the /CN, /CT, and /MN fields incorporate the
MeSH 2005 vocabulary.  See http://www.nlm.nih.gov/mesh/ and
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html for a
description of changes.

=> fil casreact
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26, 1996), unless otherwise indicated in the original publications.

FILE CONTENT:1840 - 24 Jul 2005 VOL 143 ISS 4

New CAS Information Use Policies, enter HELP USAGETERMS for details.

************************************************************
*                                                          *
*     CASREACT now has more than 9.2 million reactions     *
*                                                          *
************************************************************

Some CASREACT records are derived from the ZIC/VINITI database (1974-1991)
provided by InfoChem, INPI data prior to 1986, and Biotransformations
database compiled under the direction of Professor Dr. Klaus Kieslich.

This file contains CAS Registry Numbers for easy and accurate substance
identification.

=> file stnguide
FILE 'STNGUIDE' ENTERED AT 15:24:12 ON 27 JUL 2005
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AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE
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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Jul 22, 2005 (20050722/UP).

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=> d que stat l8
L6                STR
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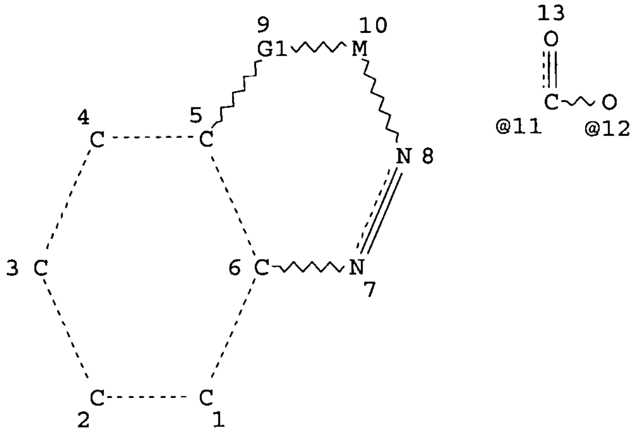

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VAR G1=O/S/SE/P/N/11/12
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
MLEVEL  IS CLASS  AT   7  8 10
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  13

STEREO ATTRIBUTES: NONE
L8          19568 SEA FILE=REGISTRY SSS FUL L6

100.0% PROCESSED  136021 ITERATIONS                          19568 ANSWERS
SEARCH TIME: 00.00.01


=> d que stat l16
L6                STR
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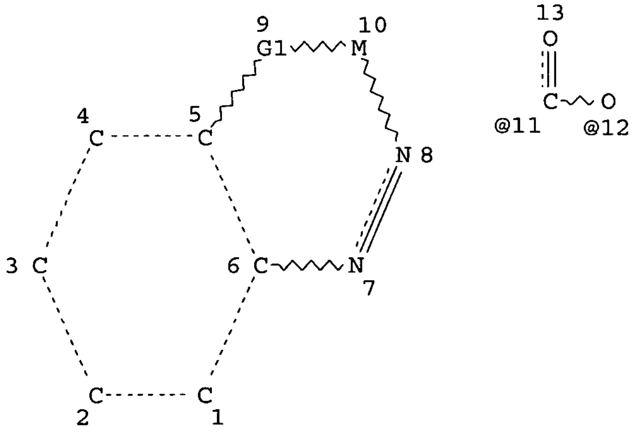

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VAR G1=O/S/SE/P/N/11/12
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
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```
MLEVEL   IS CLASS   AT    7  8 10
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  13

STEREO ATTRIBUTES: NONE
L8         19568 SEA FILE=REGISTRY SSS FUL L6
L14              STR
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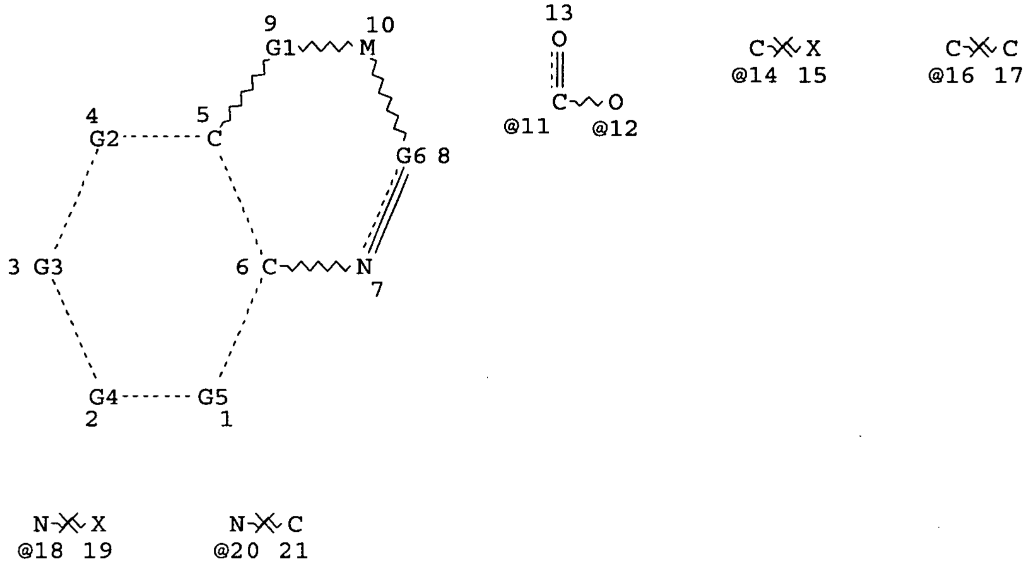

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VAR G2=CH/14/16
VAR G3=CH/14/16
VAR G4=CH/14/16
VAR G5=CH/14/16
VAR G6=NH/18/20
NODE ATTRIBUTES:
NSPEC    IS RC      AT  15
NSPEC    IS RC      AT  17
NSPEC    IS RC      AT  19
NSPEC    IS RC      AT  21
DEFAULT MLEVEL IS ATOM
MLEVEL   IS CLASS   AT   7 10
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  21

STEREO ATTRIBUTES: NONE
L16         7180 SEA FILE=REGISTRY SUB=L8 SSS FUL L14

100.0% PROCESSED   19568 ITERATIONS                          7180 ANSWERS
SEARCH TIME: 00.00.01


=> d que 143
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L6                STR
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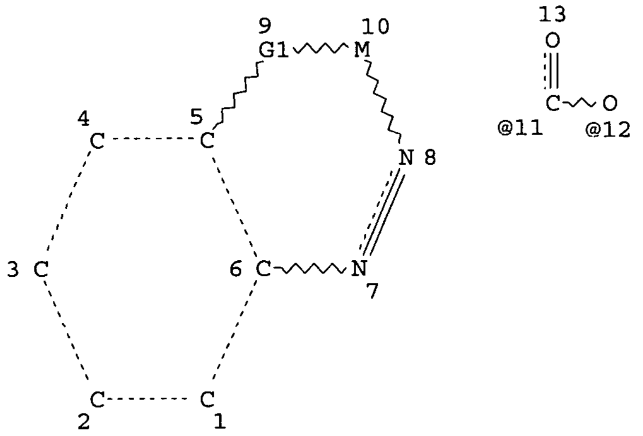

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VAR G1=O/S/SE/P/N/11/12
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
MLEVEL  IS CLASS  AT   7  8 10
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  13

STEREO ATTRIBUTES: NONE
L8         19568 SEA FILE=REGISTRY SSS FUL L6
L10        18911 SEA FILE=REGISTRY ABB=ON  PLU=ON  L8 AND (B4 OR B5 OR B6 OR B7
                 OR B8 OR B1 OR B2)/PG
L11         4906 SEA FILE=REGISTRY ABB=ON  PLU=ON  L8 AND B8/PG
L14              STR
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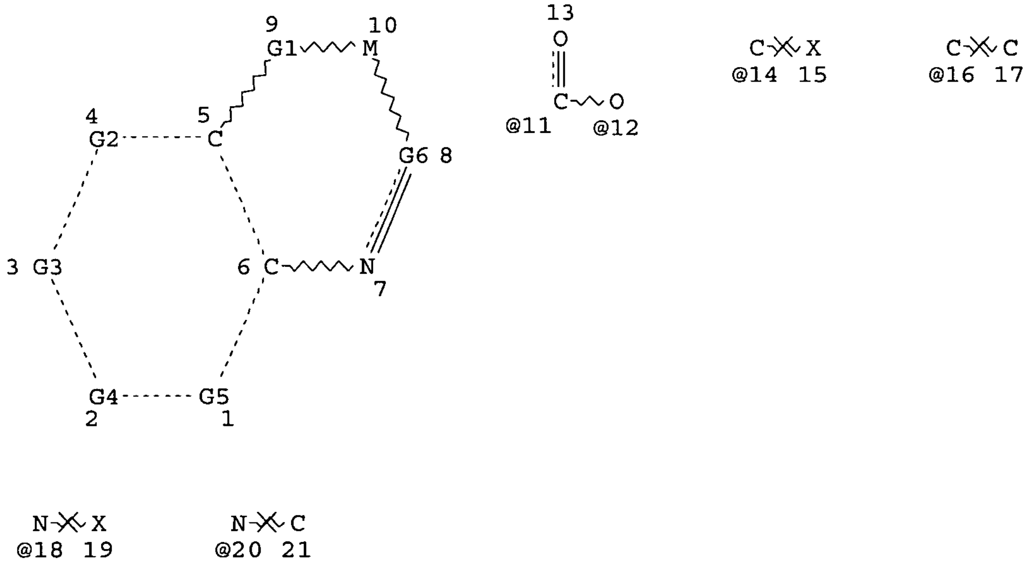

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VAR G1=O/S/SE/P/N/11/12
VAR G2=CH/14/16
VAR G3=CH/14/16
VAR G4=CH/14/16
```

```
VAR G5=CH/14/16
VAR G6=NH/18/20
NODE ATTRIBUTES:
NSPEC   IS RC     AT  15
NSPEC   IS RC     AT  17
NSPEC   IS RC     AT  19
NSPEC   IS RC     AT  21
DEFAULT MLEVEL IS ATOM
MLEVEL  IS CLASS  AT   7 10
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  21

STEREO ATTRIBUTES: NONE
L16        7180 SEA FILE=REGISTRY SUB=L8 SSS FUL L14
L17        2217 SEA FILE=REGISTRY ABB=ON  PLU=ON  L16 AND L11
L20         628 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17
L21           6 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17 (L) CAT/RL
L22          11 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17 (L) ?CATALY?
L23          26 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L17 (L) ?POLYMER?
L24          35 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L21 OR L22 OR L23)
L25          10 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L20 AND (POLYMER?)/SC,SX
L26          41 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L24 OR L25)
L27        6858 SEA FILE=REGISTRY ABB=ON  PLU=ON  L16 AND L10
L28        4641 SEA FILE=REGISTRY ABB=ON  PLU=ON  L27 NOT L17
L30           7 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L28 (L) CAT/RL
L31          70 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L28 (L) ?POLYMER?
L32          10 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L28 (L) ?CATALY?
L33          78 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L30 OR L31 OR L32)
L34          71 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L33 NOT L26
L35          26 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L34 AND POLYMER?/SC,SX
L36          67 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L35 OR L26
L41          59 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L36 AND ?POLYMER?
L42          10 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L41 AND ?CATALY?
L43          59 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L41 OR L42)


=> d his l48

     (FILE 'USPATFULL, USPAT2, CAOLD, TOXCENTER, CASREACT' ENTERED AT 13:57:12
     ON 27 JUL 2005)
L48          26 S L46 AND L47

=> d que nos l48
L6              STR
L8        19568 SEA FILE=REGISTRY SSS FUL L6
L11        4906 SEA FILE=REGISTRY ABB=ON  PLU=ON  L8 AND B8/PG.
L14             STR
L16        7180 SEA FILE=REGISTRY SUB=L8 SSS FUL L14
L17        2217 SEA FILE=REGISTRY ABB=ON  PLU=ON  L16 AND L11
L44         201 SEA L17
L45         188 DUP REM L44 (13 DUPLICATES REMOVED)
L46          32 SEA L45 AND ?CATALY?/BI,IT,ST,CC,CT
L47          81 SEA L45 AND ?POLYMER?/BI,IT,ST,CC,CT
L48          26 SEA L46 AND L47


=> d que nos l53
```

```
L6                STR
L8          19568 SEA FILE=REGISTRY SSS FUL L6
L11          4906 SEA FILE=REGISTRY ABB=ON  PLU=ON  L8 AND B8/PG
L14               STR
L16          7180 SEA FILE=REGISTRY SUB=L8 SSS FUL L14
L17          2217 SEA FILE=REGISTRY ABB=ON  PLU=ON  L16 AND L11
L49             0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 AND MEDLINE/LC
L50             0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 AND BIOSIS/LC
L51             0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 AND EMBASE/LC
L52             0 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 AND CANCERLIT/LC
L53             0 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L49 OR L50 OR L51 OR L52)


=> d his l60

     (FILE 'PASCAL, JICST-EPLUS, SCISEARCH, APOLLIT' ENTERED AT 14:09:19 ON 27
     JUL 2005)
L60            10 DUP REM L59 (6 DUPLICATES REMOVED)

=> d que nos l60
L54               QUE  ABB=ON  PLU=ON  NICKEL OR NI OR PALLADIUM OR PD OR P
                  LATINUM OR PT
L55           148 SEA L54 (5A) AZO
L56            43 SEA ((TRANSITION OR (D(1W) BLOCK)) (2A) (METAL OR ELEMENT))
                  (5A) AZO
L57             9 SEA (L55 OR L56) (10A) ?CATALY?
L58             7 SEA (L55 OR L56) (10A) ?POLYMER?
L59            16 SEA (L57 OR L58)
L60            10 DUP REM L59 (6 DUPLICATES REMOVED)


=> d que l78
L61          3995 SEA FILE=WPIX ABB=ON  PLU=ON  ((K531 OR K534) (P) (A42? OR
                  A430 OR A500 OR A54? OR A600 OR A67?))/M0,M1,M2,M3,M4,M5,M6
L62          1350 SEA FILE=WPIX ABB=ON  PLU=ON  C09B045?/IPC
L63           986 SEA FILE=WPIX ABB=ON  PLU=ON  L61 AND L62
L65          1642 SEA FILE=WPIX ABB=ON  PLU=ON  B01J031-12/IPC
L66         12140 SEA FILE=WPIX ABB=ON  PLU=ON  A02-A06/MC
L67             1 SEA FILE=WPIX ABB=ON  PLU=ON  L63 AND (L65 OR L66)
L68          2016 SEA FILE=WPIX ABB=ON  PLU=ON  (NICKEL/BIX OR NI/BIX OR
                  PALLADIUM/BIX OR PD/BIX OR PLATINUM/BIX OR PT/BIX) (10A)
                  AZO?/BIX
L74            30 SEA FILE=WPIX ABB=ON  PLU=ON  (((TRANSITION OR (D(1W) BLOCK))
                  (2A) (METAL OR ELEMENT))(5A) AZO)/BIX
L75            54 SEA FILE=WPIX ABB=ON  PLU=ON  (L68 OR L74) AND L63
L76            12 SEA FILE=WPIX ABB=ON  PLU=ON  L75 AND (?CATALY? OR ?POLYMER?)/B
                  IX
L78            12 SEA FILE=WPIX ABB=ON  PLU=ON  L67 OR L76


=> dup rem l43 l48 l60 l78
DUPLICATE IS NOT AVAILABLE IN 'CAOLD'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
FILE 'HCAPLUS' ENTERED AT 15:26:08 ON 27 JUL 2005
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FILE 'USPATFULL' ENTERED AT 15:26:08 ON 27 JUL 2005
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```

```
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FILE 'SCISEARCH' ENTERED AT 15:26:08 ON 27 JUL 2005
Copyright (c) 2005 The Thomson Corporation

FILE 'WPIX' ENTERED AT 15:26:08 ON 27 JUL 2005
COPYRIGHT (C) 2005 THE THOMSON CORPORATION
PROCESSING COMPLETED FOR L43
PROCESSING COMPLETED FOR L48
PROCESSING COMPLETED FOR L60
PROCESSING COMPLETED FOR L78
L84         105 DUP REM L43 L48 L60 L78 (2 DUPLICATES REMOVED)
                ANSWERS '1-59' FROM FILE HCAPLUS
                ANSWERS '60-84' FROM FILE USPATFULL
                ANSWERS '85-90' FROM FILE PASCAL
                ANSWER '91' FROM FILE JICST-EPLUS
                ANSWERS '92-94' FROM FILE SCISEARCH
                ANSWERS '95-105' FROM FILE WPIX

=> file stnguide
FILE 'STNGUIDE' ENTERED AT 15:26:33 ON 27 JUL 2005
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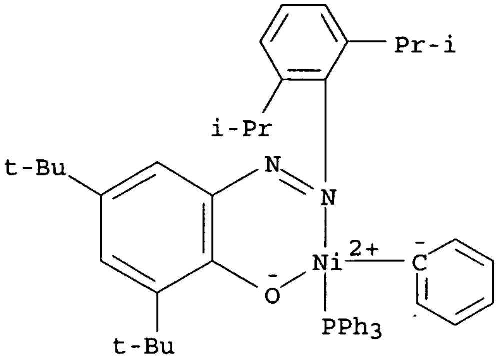
FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Jul 22, 2005 (20050722/UP).
```

```
=> d ibib ed ab hitstr
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL, PASCAL, JICST-EPLUS,
SCISEARCH, WPIX' - CONTINUE? (Y)/N:y


L84  ANSWER 1 OF 105  HCAPLUS  COPYRIGHT 2005 ACS on STN DUPLICATE 1
ACCESSION NUMBER:         2004:995796  HCAPLUS
DOCUMENT NUMBER:          141:411408
TITLE:                    Metal complexes as olefin polymerization
                          catalyst system
INVENTOR(S):              Hinkle, Paul Veinbergs; Rix, Francis Charles
PATENT ASSIGNEE(S):       USA
SOURCE:                   U.S. Pat. Appl. Publ., 44 pp.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   2
PATENT INFORMATION:

     PATENT NO.          KIND    DATE        APPLICATION NO.         DATE
     ---------------     ----    --------    --------------------    --------
     US 2004230015        A1     20041118    US 2003-436741          20030513
     WO 2004101576        A1     20041125    WO 2004-US10597         20040407
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
             BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
             ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
             SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,
             TD, TG
     WO 2004101634        A1     20041125    WO 2004-US15277         20040513
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
             SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
             SN, TD, TG
     US 2004260043        A1     20041223    US 2004-844683          20040513
PRIORITY APPLN. INFO.:                       US 2003-436741       A  20030513
OTHER SOURCE(S):          MARPAT 141:411408
ED   Entered STN:  19 Nov 2004
AB   This invention relates to a compound (L0)aM(L1)b(L2)c (M = groups 3-11 of
     the periodic table; L1 = formal anionic ligand; L2 = formal neutral
     ligand, a≥1; b≥0; c≥1; L0 = RN:EAr0 provided R =
     optionally substituted Ph group bearing an O- group adjacent to N (with a
     proviso); E = N, P; Ar 0 = arene).  This invention further relates to a
     process to oligomerize and/or polymerize unsatd. monomers using
     the above compns., optionally combined with an activator.
IT   732285-99-3P 793687-74-8P
     RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
```

```
      (Reactant or reagent)
         (manufacture and use of bidentate E-phenoxide type transition metal
         complexes as olefin polymerization catalyst system)
RN    732285-99-3  HCAPLUS
CN    Nickel, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-4,6-bis(1,1-
      dimethylethyl)phenolato-κO]phenyl(triphenylphosphine)- (9CI)  (CA
      INDEX NAME)
```



```
RN    793687-74-8  HCAPLUS
CN    Nickel, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-6-(1,1-
      dimethylethyl)-4-methylphenolato-κO]phenyl(triphenylphosphine)-
      (9CI)  (CA INDEX NAME)
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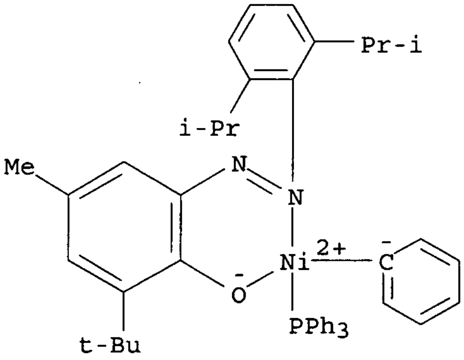

```
=> d ibib ed ab hitstr 2-59
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, USPATFULL, PASCAL, JICST-EPLUS,
SCISEARCH, WPIX' - CONTINUE? (Y)/N:y


L84  ANSWER 2 OF 105  HCAPLUS  COPYRIGHT 2005 ACS on STN DUPLICATE 2
ACCESSION NUMBER:          2004:631256  HCAPLUS
DOCUMENT NUMBER:           141:174614
TITLE:                     Monometallic azo complexes of late transition metals
                           for the polymerization of olefins
INVENTOR(S):               Weiss, Thomas
PATENT ASSIGNEE(S):        Bayer AG, Germany
```

SOURCE: Ger. Offen., 25 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

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     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ---------------     ----   --------    --------------------   --------
     DE 10304158          A1    20040805    DE 2003-10304158       20030203
     EP 1454926           A1    20040908    EP 2004-1164           20040121
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
     CA 2456518           AA    20040803    CA 2004-2456518        20040130
     US 2004186007        A1    20040923    US 2004-768291         20040130
     JP 2004238395        A2    20040826    JP 2004-25253          20040202
PRIORITY APPLN. INFO.:                      DE 2003-10304158    A  20030203
OTHER SOURCE(S):          MARPAT 141:174614
```

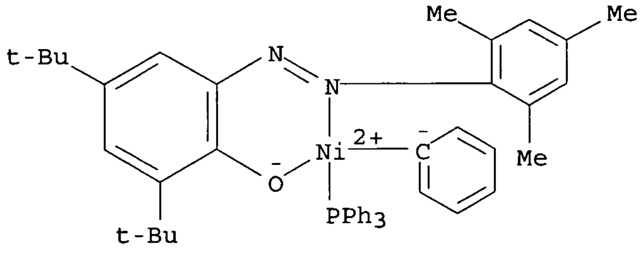
ED Entered STN: 06 Aug 2004

AB The title azo complexes have the formula I, where Nu1 = O, S, Se, PRa, NRa or COO; Ra = H, alkyl or aryl group; R, R1, R2, R3 and R4 = H, halogen, substituted or unsubstituted C1-8 alkyl, C2-8 alkenyl, C3-12 cycloalkyl, C7-13 arylalkyl or C6-14 aryl group; M1 = a group 4-12 element, such as Ti, Zr, Cr, V, Fe, Co, Ni, Pd, Cu or Zn; L1 = a neutral ligand, such as PPh3; L2 = an anionic ligand, such as Me, Ph and z = 1-2. The complexes can be used as **catalysts** for (co)**polymerization** of olefins and polar olefins.

IT **732285-98-2P 732285-99-3P 732286-00-9P**
732286-01-0P 732286-02-1P 732286-03-2P
732286-04-3P
RL: **CAT (Catalyst use)**; IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(preparation of monometallic azo complexes of late transition metals for the **polymerization** of olefins)

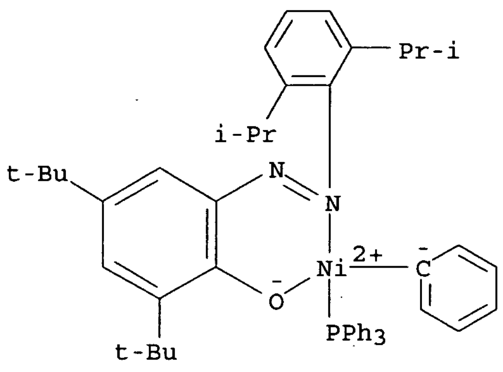
RN 732285-98-2 HCAPLUS

CN Nickel, [2,4-bis(1,1-dimethylethyl)-6-[(2,4,6-trimethylphenyl)azo-κN2]phenolato-κO]phenyl(triphenylphosphine)- (9CI) (CA INDEX NAME)



RN 732285-99-3 HCAPLUS

CN Nickel, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-4,6-bis(1,1-dimethylethyl)phenolato-κO]phenyl(triphenylphosphine)- (9CI) (CA INDEX NAME)



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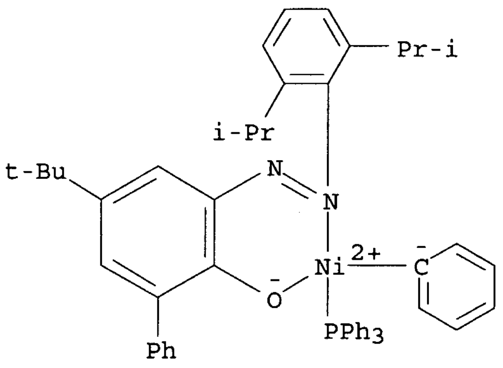

RN 732286-01-0 HCAPLUS
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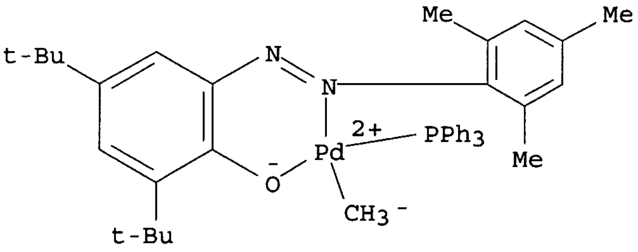
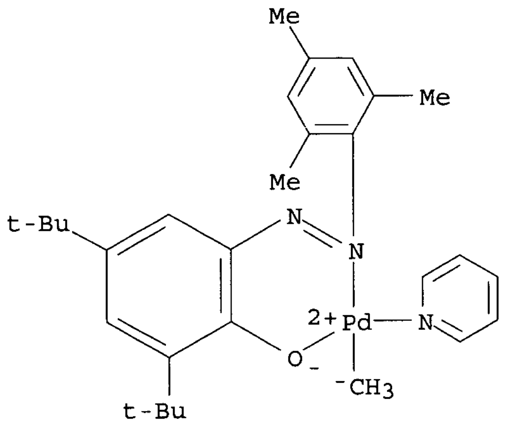
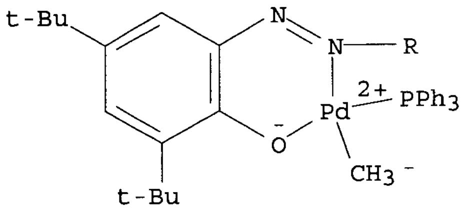
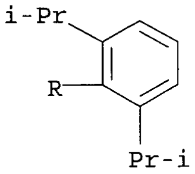


RN 732286-02-1 HCAPLUS
CN Palladium, [2,4-bis(1,1-dimethylethyl)-6-[(2,4,6-trimethylphenyl)azo-κN2]phenolato-κO]methyl(pyridine)- (9CI) (CA INDEX NAME)

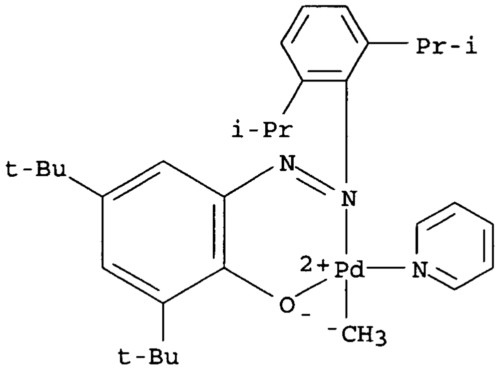


RN 732286-03-2 HCAPLUS
CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-4,6-bis(1,1-dimethylethyl)phenolato-κO]methyl(triphenylphosphine)- (9CI) (CA INDEX NAME)





RN 732286-04-3 HCAPLUS
CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-4,6-bis(1,1-dimethylethyl)phenolato-κO]methyl(pyridine)- (9CI) (CA INDEX NAME)



L84 ANSWER 3 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:17031 HCAPLUS

DOCUMENT NUMBER: 142:94311

TITLE: **Catalyst** for **polymerization** or **copolymerization** of olefins, preparation and use of the same

INVENTOR(S): Sun, Xiuli; Hu, Weiqiu; Wang, Cong; Tang, Yong; Zhang, Yuliang; Xia, Chun-An

PATENT ASSIGNEE(S): Peop. Rep. China

SOURCE: U.S. Pat. Appl. Publ., 44 pp., Cont.-in-part of Appl. No. PCT/CN02/00425.
CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

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     PATENT NO.          KIND   DATE       APPLICATION NO.        DATE
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     US 2005004331        A1    20050106   US 2004-761827         20040121
     CN 1332182           A     20020123   CN 2001-126323         20010723
     CN 1364818           A     20020821   CN 2002-110844         20020209
     WO 2003010207        A1    20030206   WO 2002-CN425          20020617
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CO,
             CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM,
             HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,
             LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL,
             PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA,
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             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.:                     CN 2001-126323      A  20010723
                                           CN 2002-110844      A  20020209
                                           WO 2002-CN425       A2 20020617
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OTHER SOURCE(S): MARPAT 142:94311

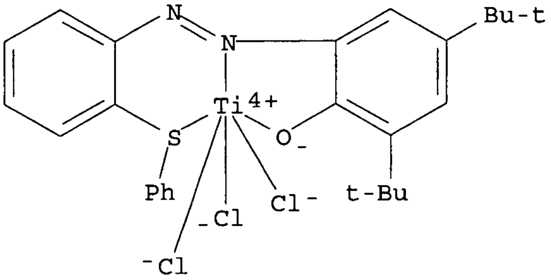
ED Entered STN: 09 Jan 2005

AB **Catalysts** and **catalyst** systems useful for the olefin **polymerization** and **copolymn.**, and their synthesis procedure and usage are disclosed. These **catalyst** are a kind of novel complexes formed by transition metal from group 3 to group 11 and multidentate ligand, wherein the **catalysts** have the following formula (I); wherein A, B, D, E, G, and connecting bonds comprise a tridentate ligand; R1, R2 and R3 each individually represents H or a chemical inert substituted or unsubstituted hydrocarbyl moiety; X represents a weakly coordinating monovalent ligand; d is 0 or 1; q is 0 or 1; m is 1, 2 or 3; and n is 1, 2, 3 or 4 as needed to balance the charge on M.

IT **819052-64-7P**
RL: **CAT (Catalyst use)**; IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(preparation and use of olefin **polymerization catalyst** based on transition metal complexes with multidentate ligands)

RN 819052-64-7 HCAPLUS

CN Titanium, [2,4-bis(1,1-dimethylethyl)-6-[[2-(phenylthio-κS)phenyl]azo-κN1]phenolato-κO]trichloro- (9CI) (CA INDEX NAME)



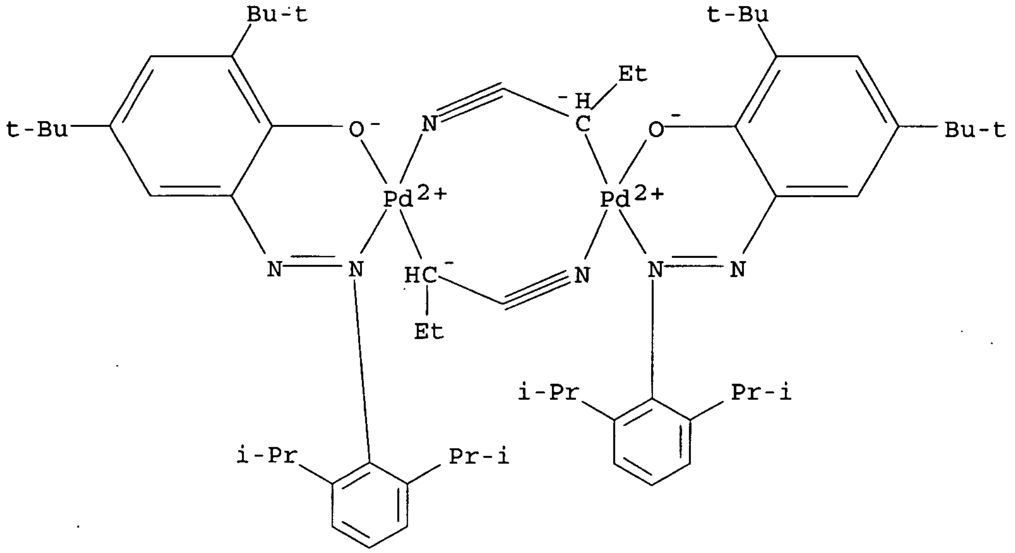
L84 ANSWER 4 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	2005:64316 HCAPLUS
DOCUMENT NUMBER:	142:336672
TITLE:	Insertion of Acrylonitrile into Palladium Methyl Bonds in Neutral and Anionic Pd(II) Complexes
AUTHOR(S):	Groux, Laurent F.; Weiss, Thomas; Reddy, Dastigiri N.; Chase, Preston A.; Piers, Warren E.; Ziegler, Tom; Parvez, Masood; Benet-Buchholz, Jordi
CORPORATE SOURCE:	Department of Chemistry, University of Calgary, Calgary, AB, T2N 1N4, Can.
SOURCE:	Journal of the American Chemical Society (2005), 127(6), 1854-1869 CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER:	American Chemical Society
DOCUMENT TYPE:	Journal
LANGUAGE:	English

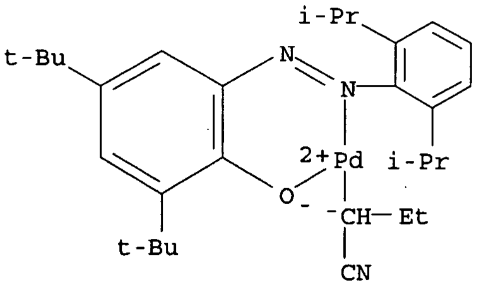
ED Entered STN: 25 Jan 2005

AB The reactions of a series of Pd(II) Me compds. of general formula LPd(NCCH3)CH3, where L is a bulky phenoxydiazene or phenoxyaldimine ligand with the polar olefin acrylonitrile (AN), are reported. The compds. react with an excess of AN to give the products of 2,1 insertion into the Pd-Me bond, yielding dimers and/or trimers which feature bridging α-cyano groups. The reactions were studied by low temperature 1H NMR spectroscopy, revealing an initial formation of compds. featuring N-bound AN, which isomerized to an (unobserved) π-bound species that rapidly underwent 2,1 insertion into the Pd-Me bond. Intermediate oligomeric complexes retaining a Pd-Me function were observed at low [AN] in these reactions. Under pseudo first-order conditions, kobs values of 8.5 + 10-5 to 2.68 + 10-3 M-1 (-22 °C to 10 °C, 100 equiv of AN) and activation parameters of ΔH.dbldag. = 14.4(5) kcal mol-1 and ΔS.dbldag. = -19(5) eu were obtained in one case. Comparison of the overall rates of insertion between two LPd(NCCH3)CH3, differing in the overall charge on the supporting ligand L, showed that the complex bearing a neg. charged ligand reacts with AN twice as fast as one with no anionic charge. The rates of insertion in both of these complexes are significantly faster than reported rates for analogous reactions in cationic Pd(II) derivs., indicating that increasing the neg. charge on the complex enhances the rate of AN insertion. These results provide fundamental mechanistic insights into a crucial reaction for incorporation of polar comonomers into alpha olefins via a coordination **polymn**. mechanism.

IT **848395-10-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(acrylonitrile insertion dimer; insertion of acrylonitrile into Pd-Me bonds in neutral and anionic Pd(II) complexes)
RN 848395-10-8 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED

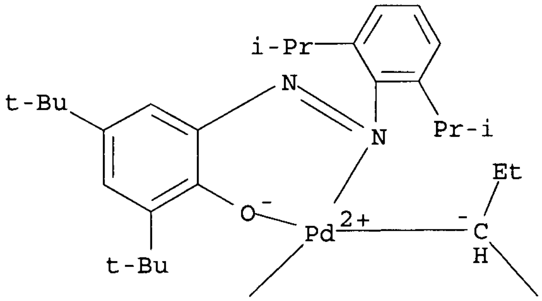


IT **848395-11-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(acrylonitrile insertion monomer; insertion of acrylonitrile into Pd-Me bonds in neutral and anionic Pd(II) complexes)
RN 848395-11-9 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED



IT **847908-24-1P**
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(acrylonitrile insertion trimer; insertion of acrylonitrile into Pd-Me bonds in neutral and anionic Pd(II) complexes)
RN 847908-24-1 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED

PAGE 1-A



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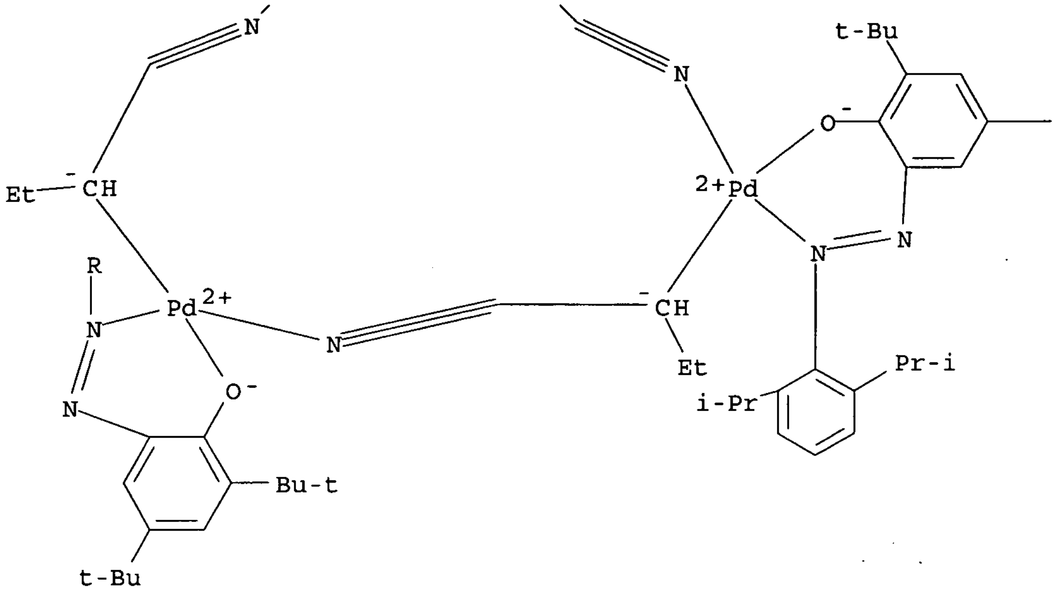

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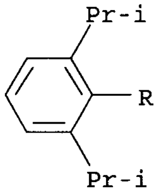
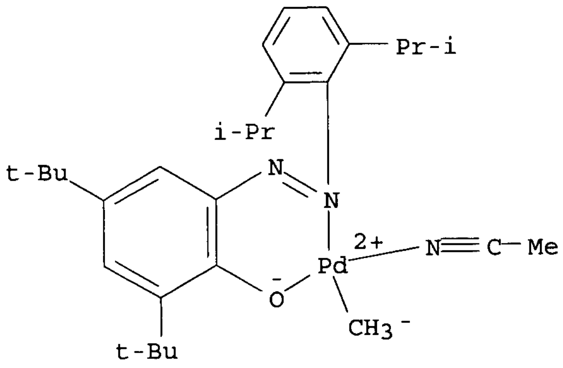
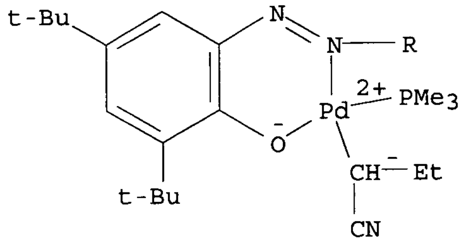
PAGE 3-A

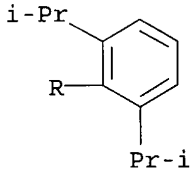


IT **848394-97-8P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(insertion of acrylonitrile into Pd-Me bonds in neutral and anionic Pd(II) complexes)
RN 848394-97-8 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED



IT **848395-12-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(insertion of acrylonitrile into Pd-Me bonds in neutral and anionic Pd(II) complexes)
RN 848395-12-0 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED





REFERENCE COUNT: 94 THERE ARE 94 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L84 ANSWER 5 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:128437 HCAPLUS
DOCUMENT NUMBER: 142:392510
TITLE: The Exploration of Neutral Azoligand-Based Grubbs Type Palladium(II) Complex as Potential **Catalyst** for the **Copolymerization** of Ethylene with Acrylonitrile: A Theoretical Study Based on Density Functional Theory
AUTHOR(S): Yang, Sheng-Yong; Szabo, Miklos J.; Michalak, Artur; Weiss, Thomas; Piers, Warren E.; Jordan, Richard F.; Ziegler, Tom
CORPORATE SOURCE: Department of Chemistry, University of Calgary, Calgary, AB, T2N 1N4, Can.
SOURCE: Organometallics (2005), 24(6), 1242-1251

CODEN: ORGND7; ISSN: 0276-7333
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 15 Feb 2005

AB A combined quantum-mech. (QM) and mol.-mech. (MM) method was used to explore the potential of neutral azoligand-based Grubbs type Pd(II) complexes as **catalysts** for ethylene-acrylonitrile **copolymn.** The 1st part of the study includes complexation of the monomers to the **catalyst**, the 1st insertion step, and isomerization of the 1st insertion product I. The π-complexation energies of acrylonitrile and ethylene are comparable, but the acrylonitrile insertion has a lower barrier over ethylene insertion by 5 kcal/mol in the 1st step. The leading product I might conduct isomerizations with a lower barrier to form different chelate structures. However, the most stable isomers have the CN group in the α-position. The 2nd part explores the further role of the kinetic insertion product I. 1 Readily can complex another ethylene or acrylonitrile monomer. Unfortunately, it is even more favorable for I to coordinate its Pd(II) center to a N atom on a α-cyano-alkyl group of another I complex, leading to inert oligomers of 1 that do not further react with ethylene or acrylonitrile. Trimers of I are preferred over dimers because they allow for an optimal linear Pd-NC bonding mode with an angle of .apprx.180°. The preference for Pd coordination to the N on a α-cyano-alkyl group over N-coordination to acrylonitrile stems from the fact that the acrylonitrile N is less electron rich due to donation to the π* orbital of the olefinic bond.

IT **847908-24-1 849937-44-6 849937-45-7**
849937-46-8 849937-47-9 849937-48-0
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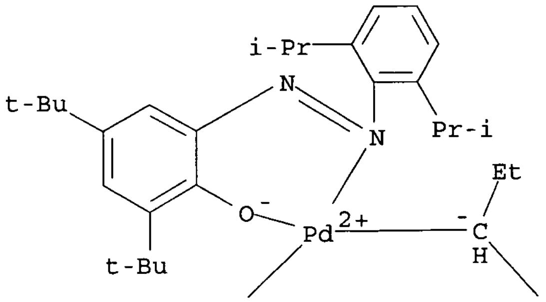
849942-35-4 849942-36-5 849942-37-6
849942-38-7 849942-40-1
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(combined quantum-mech. (QM) and mol.-mech. (MM) of neutral azoligand-based Grubbs type palladium(II) complex as potential **catalyst** for the **copolymn.** of ethylene with acrylonitrile)

RN 847908-24-1 HCAPLUS
CN INDEX NAME NOT YET ASSIGNED

PAGE 1-A



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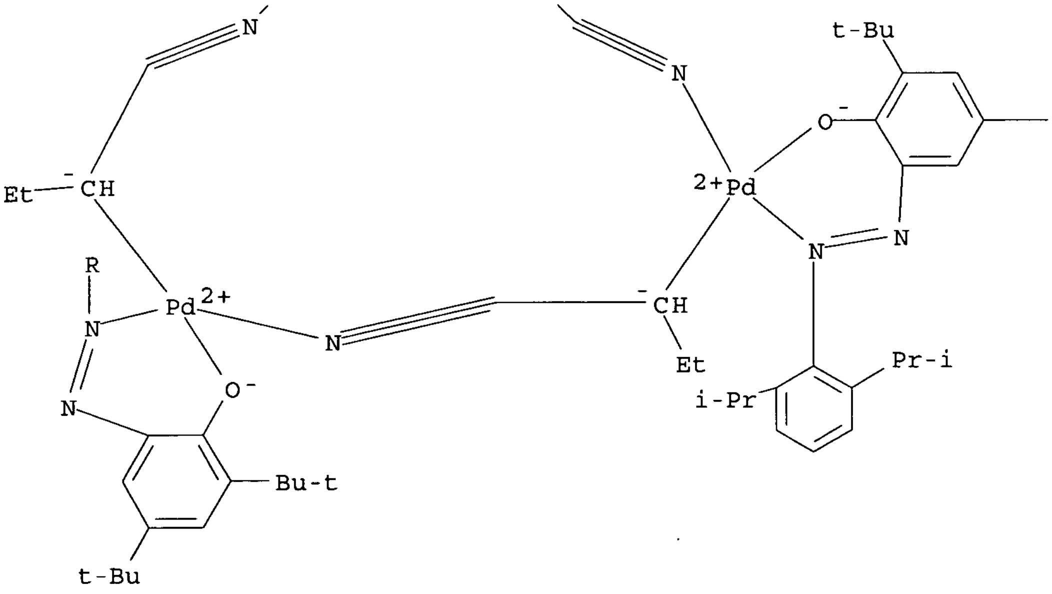

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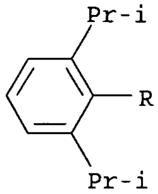
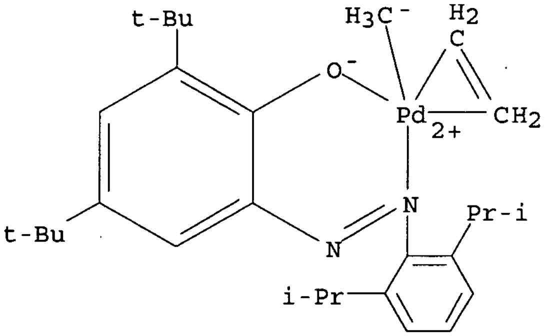


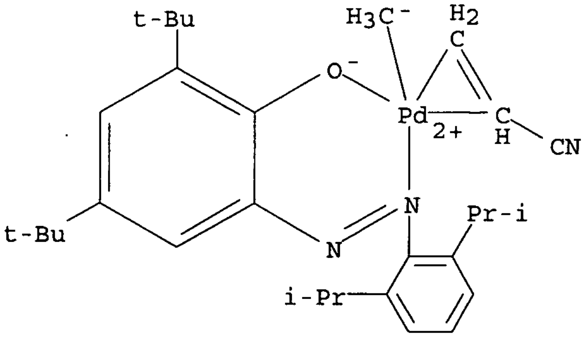
RN 849937-44-6 HCAPLUS

CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-4,6-bis(1,1-dimethylethyl)phenolato-κO](η2-ethene)methyl-, stereoisomer (9CI) (CA INDEX NAME)

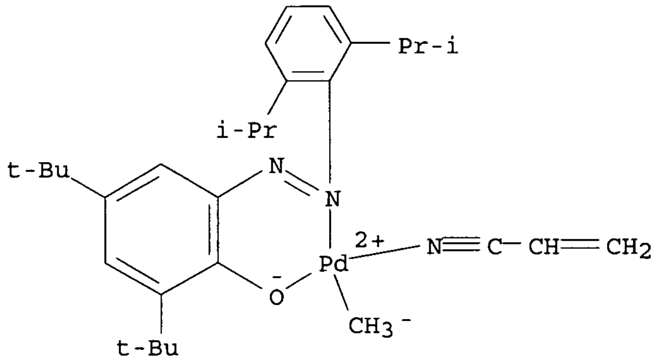


RN 849937-45-7 HCAPLUS

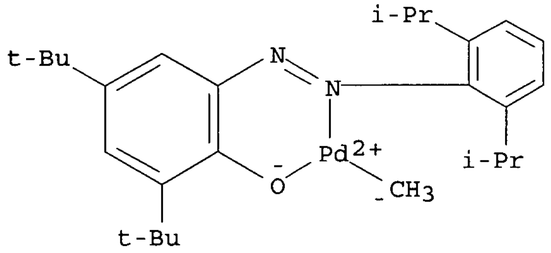
CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-4,6-bis(1,1-dimethylethyl)phenolato-κO]methyl[(2,3-η)-2-propenenitrile]-, stereoisomer (9CI) (CA INDEX NAME)



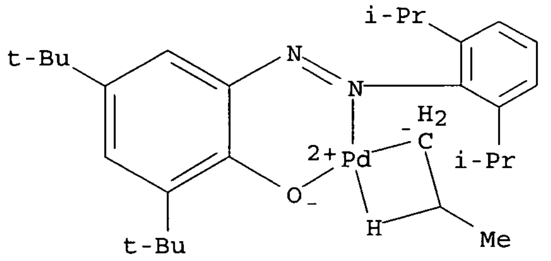
RN 849937-46-8 HCAPLUS
CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-4,6-bis(1,1-dimethylethyl)phenolato-κO]methyl(2-propenenitrile)-, (SP-4-4)- (9CI) (CA INDEX NAME)



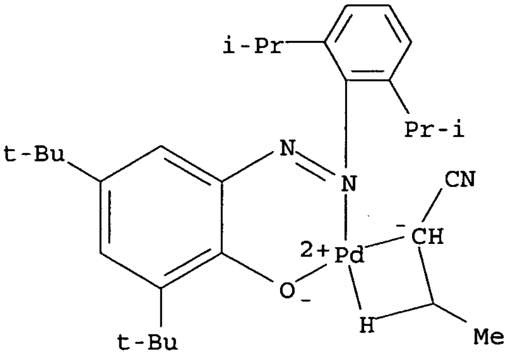
RN 849937-47-9 HCAPLUS
CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-4,6-bis(1,1-dimethylethyl)phenolato-κO]methyl- (9CI) (CA INDEX NAME)



RN 849937-48-0 HCAPLUS
CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-4,6-bis(1,1-dimethylethyl)phenolato-κO](propyl-κC1,κH2)-, (SP-4-4)- (9CI) (CA INDEX NAME)



RN 849937-49-1 HCAPLUS
CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-4,6-bis(1,1-dimethylethyl)phenolato-κO][rel-(1R,2S)-1-cyanopropyl-κC1,κH2]-, (SP-4-3)- (9CI) (CA INDEX NAME)



RN 849937-50-4 HCAPLUS

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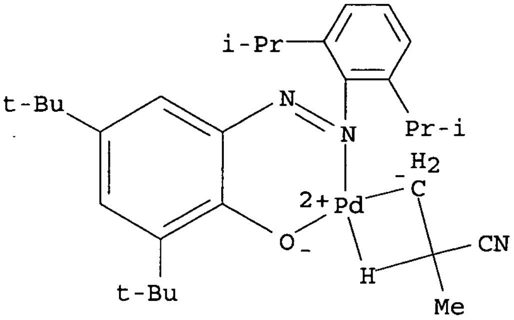
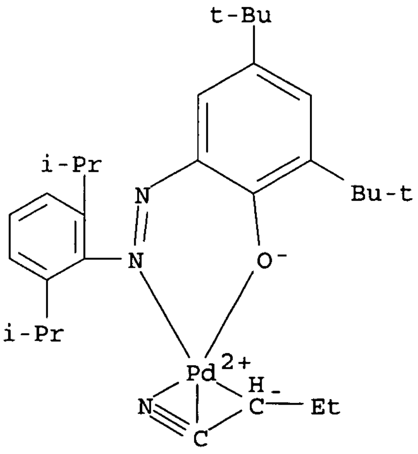


RN 849937-51-5 HCAPLUS

CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-4,6-bis(1,1-dimethylethyl)phenolato-κO](η3-1-cyanopropyl)-, stereoisomer (9CI) (CA INDEX NAME)



RN 849937-52-6 HCAPLUS

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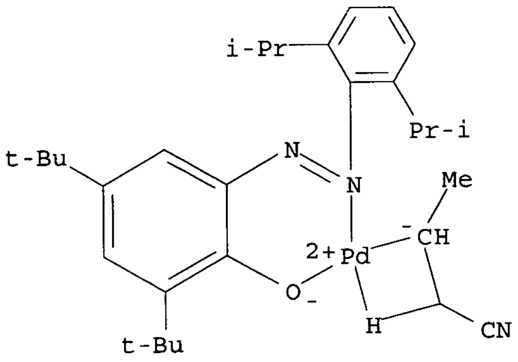

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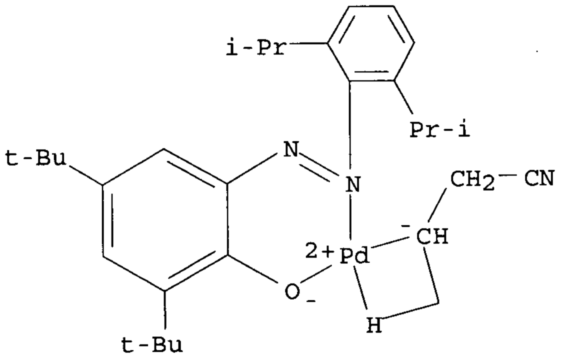
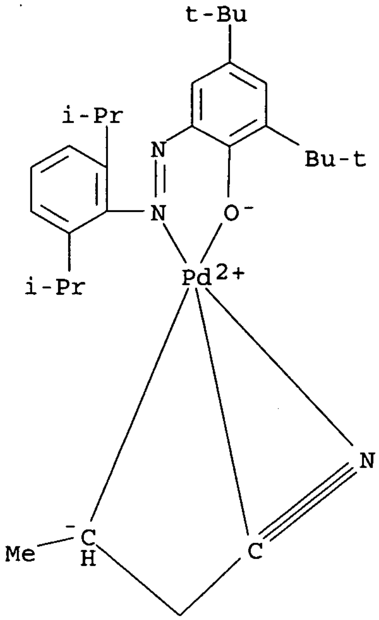
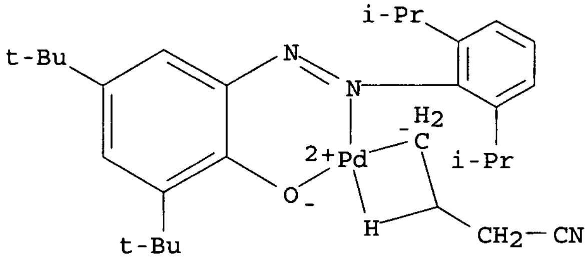


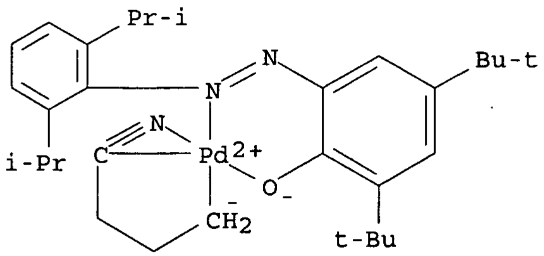
RN 849937-54-8 HCAPLUS
CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-4,6-bis(1,1-dimethylethyl)phenolato-κO](η3-2-cyano-1-methylethyl)-, stereoisomer (9CI) (CA INDEX NAME)



RN 849937-55-9 HCAPLUS
CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-4,6-bis(1,1-dimethylethyl)phenolato-κO](3-cyanopropyl-κC1,κH2)-, (SP-4-3)- (9CI) (CA INDEX NAME)

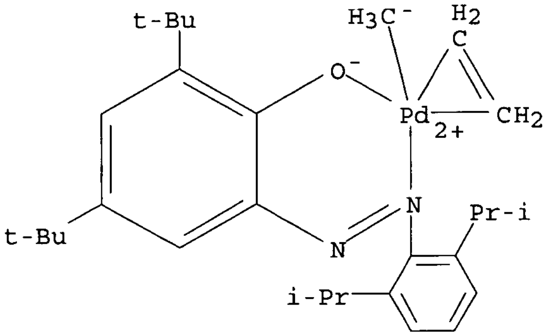


RN 849937-56-0 HCAPLUS
CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-4,6-bis(1,1-dimethylethyl)phenolato-κO](η3-3-cyanopropyl)-, stereoisomer (9CI) (CA INDEX NAME)



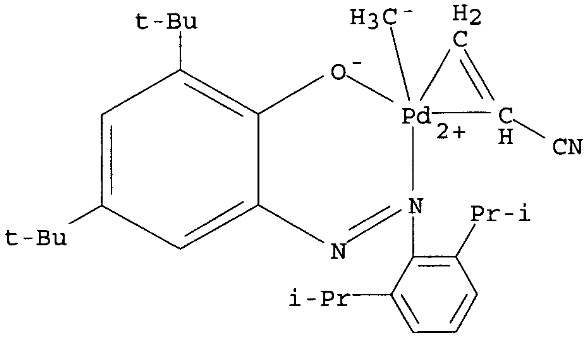
RN 849942-34-3 HCAPLUS

CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-4,6-bis(1,1-dimethylethyl)phenolato-κO](η2-ethene)methyl-, stereoisomer (9CI) (CA INDEX NAME)



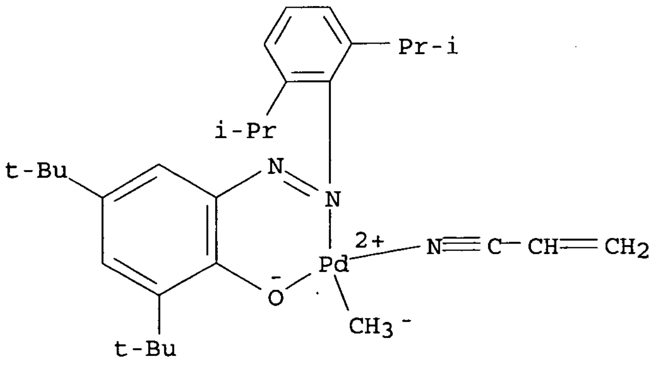
RN 849942-35-4 HCAPLUS

CN Palladium, [2-[2-[2,6-bis(1-methylethyl)phenyl]azo-κN2]-4,6-bis(1,1-dimethylethyl)phenolato-κO]methyl[(2,3-η)-2-propenenitrile]-, stereoisomer (9CI) (CA INDEX NAME)

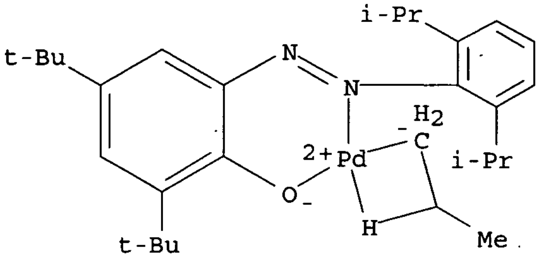


RN 849942-36-5 HCAPLUS

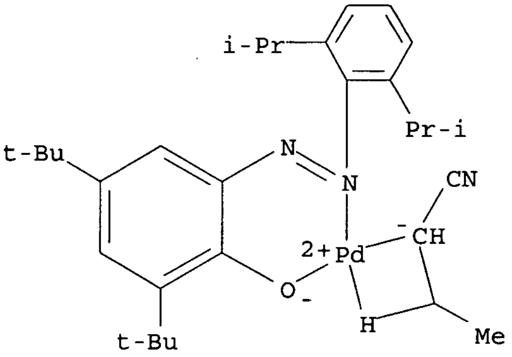
CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-4,6-bis(1,1-dimethylethyl)phenolato-κO]methyl(2-propenenitrile)-, (SP-4-3)-(9CI) (CA INDEX NAME)



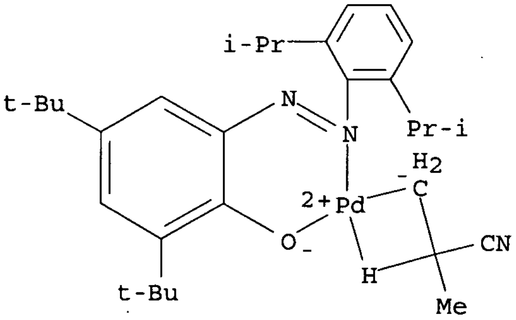
RN 849942-37-6 HCAPLUS
CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-4,6-bis(1,1-dimethylethyl)phenolato-κO](propyl-κC1,κH2)-, (SP-4-3)- (9CI) (CA INDEX NAME)



RN 849942-38-7 HCAPLUS
CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-4,6-bis(1,1-dimethylethyl)phenolato-κO](1-cyanopropyl-κC1,κH2)-, (SP-4-4)- (9CI) (CA INDEX NAME)



RN 849942-40-1 HCAPLUS
CN Palladium, [2-[[2,6-bis(1-methylethyl)phenyl]azo-κN2]-4,6-bis(1,1-dimethylethyl)phenolato-κO](2-cyanopropyl-κC1,κH2)-, (SP-4-4)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L84 ANSWER 6 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	2004:433377 HCAPLUS
DOCUMENT NUMBER:	140:431369
TITLE:	Electrophotographic toners for high-speed fixing, method for electrophotographic image formation, and electrophotographic apparatus
INVENTOR(S):	Ogawa, Yoshihiro; Kasuya, Takashige; Yusa, Hiroshi; Iida, Hideto; Yamazaki, Katsuhisa; Moribe, Shuhei
PATENT ASSIGNEE(S):	Canon Inc., Japan
SOURCE:	Jpn. Kokai Tokkyo Koho, 55 pp. CODEN: JKXXAF
DOCUMENT TYPE:	Patent
LANGUAGE:	Japanese
FAMILY ACC. NUM. COUNT:	1

PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 2004151441	A2	20040527	JP 2002-317426	20021031
PRIORITY APPLN. INFO.:				JP 2002-317426	20021031

ED Entered STN: 28 May 2004

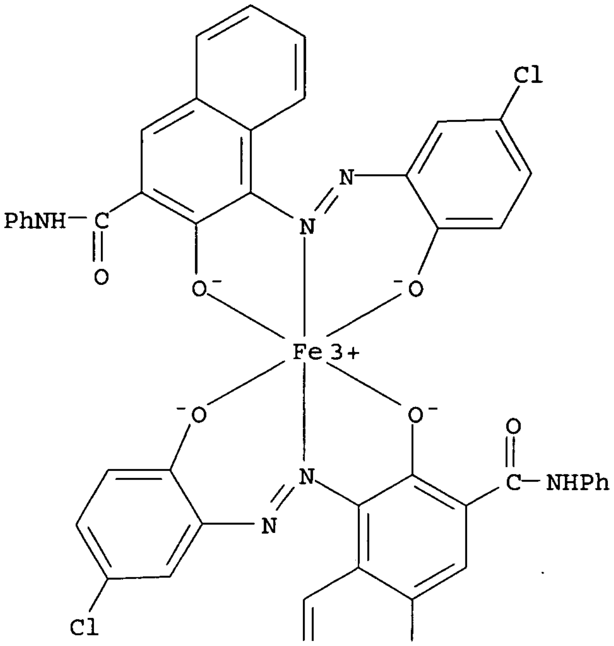
AB The toners contain (A) binders including hybrid resins comprising vinyl **polymer** units and polyester units, colorants, and (B) waxes, and are characterized by showing mol. weight distributions of mol. weight $<10,000$ (M1) 40-70, 10,000-50,000 (M2) 25-50, $>50,000$ (M3) 2-25, and $>100,000$ <10 weight% and satisfying $M1 \geq M2 > M3$ by gel permeation chromatog. for its THF-soluble components. Preferably, the binders are mixts. of ≥ 2 kinds of hybrid **polymers**, mixts. of hybrid **polymers** with polyesters or vinyl **polymers**, or mixts. of polyesters and vinyl **polymers.** Optionally, the toners may also contain 0.1-10 weight parts metal compds., per 100 weight parts binder resins. The colorants may be magnetic materials, that are contained in amts. of 30-200 weight parts, per 100 weight part binder resins. Formation of images by electrophotog. and electrophotog. apparatus both using the said toners are also claimed. The toners show excellent low-temperature fixing properties, excellent high-temperature offset characteristics, and prevented curling.

IT **104815-18-1**
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(toners containing; electrophotog. toners containing polyester-vinyl **polymer** hybrid binders with controlled mol. wts. and waxes for electrophotog. apparatus)

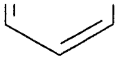
RN 104815-18-1 HCAPLUS

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



● NH_4^+

L84 ANSWER 7 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:527884 HCAPLUS
DOCUMENT NUMBER: 139:108635
TITLE: Black toner containing iron phthalocyanine as colorant
INVENTOR(S): Ichikawa, Yasuhiro; Ida, Tetsuya; Sugawara, Nobuyoshi; Komatsu, Nozomu; Hayami, Kazuhiko; Kamitaki, Takaaki
PATENT ASSIGNEE(S): Canon Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003195569	A2	20030709	JP 2001-400659	20011228
PRIORITY APPLN. INFO.:			JP 2001-400659	20011228

OTHER SOURCE(S): MARPAT 139:108635

ED Entered STN: 10 Jul 2003

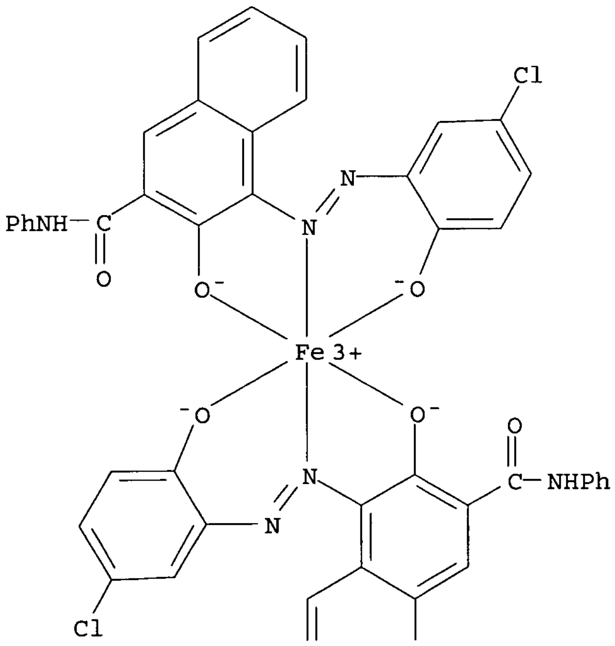
AB The black toner comprises a binder resin, a wax, and a colorant, wherein the storage elastic modulus at 80° and the loss tangent at 140° of the toner are 1 + 106 - 1 + 108 (dN/m2) and 0.2-1.5, resp., and the toner contains an Fe phthalocyanine complex I (X = electron-withdrawing group; and n = 1-6) 2-20 weight parts and a wax 0.5-10 weight parts on the basis of 100 weight parts of the binder resin. In addition, the toner may contain an Al compound of an aromatic carboxylic acid derivative as a charge controller. The binder resin may include a polyester resin, a hybrid resin having a polyester unit and a vinyl unit, a mixture of the hybrid resin and a vinyl **copolymer**, or a mixture of the hybrid resin and the polyester resin. The black toner exhibited blocking resistance and storage stability.

IT **104815-18-1**
RL: TEM (Technical or engineered material use); USES (Uses)
(charge controller; black toner containing iron phthalocyanine and charge controller)

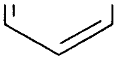
RN 104815-18-1 HCAPLUS

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



● NH_4^+

L84 ANSWER 8 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	2003:69159 HCAPLUS
DOCUMENT NUMBER:	138:145023
TITLE:	Toner for non-magnetic one-component development printing mode and method for image formation using the same
INVENTOR(S):	Nakamura, Masanobu; Sato, Yoshihiro
PATENT ASSIGNEE(S):	Dainippon Ink and Chemicals, Inc., Japan
SOURCE:	Jpn. Kokai Tokkyo Koho, 15 pp. CODEN: JKXXAF
DOCUMENT TYPE:	Patent
LANGUAGE:	Japanese
FAMILY ACC. NUM. COUNT:	1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003029455	A2	20030129	JP 2001-210687	20010711

PRIORITY APPLN. INFO.: JP 2001-210687 20010711

OTHER SOURCE(S): MARPAT 138:145023

ED Entered STN: 29 Jan 2003

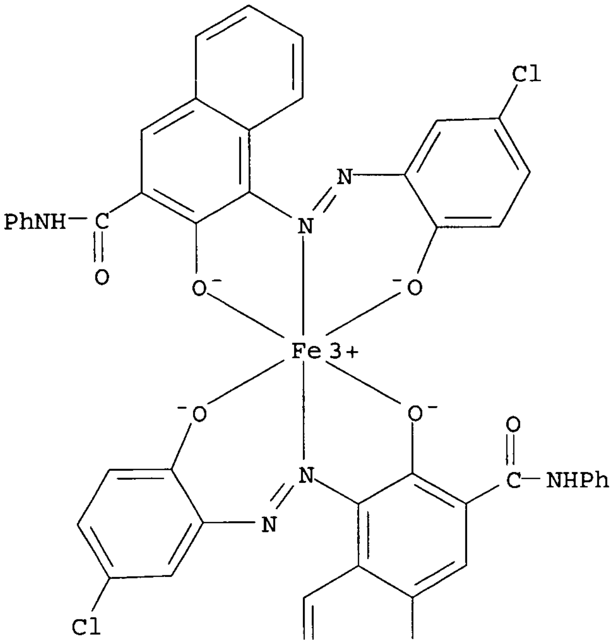
AB The title toner contains a binder resin, a colorant, and a charging agent, wherein the binder resin is a polyester made of: polybasic acid, acid anhydride, or ester; and aliphatic polyalc. excluding I(R1-2 = ethylene, propylene; m,n = 0-7 integer; m+n≤7) and wherein the charge-controlling agent is compound II(X1-2 = H, lower alkyl, lower alkoxy, nitro, halo; m, m' = 1-3 integer; R1,3 = H, C1-18 alkyl, alkenyl, sulfonamide, etc.; R2,4 = H, nitro; A+ = ammonium, H, Na, K, mixed cation thereof). The toner provides good characteristics on fixing, offset, and charging.

IT **167548-21-2 191113-15-2 197526-67-3D**, ammonium or alkaline salts
RL: TEM (Technical or engineered material use); USES (Uses)
(charge-controlling agent; toner for non-magnetic one-component development mode and method for image formation using the same)

RN 167548-21-2 HCAPLUS

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]- (9CI) (CA INDEX NAME)

PAGE 1-A



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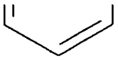
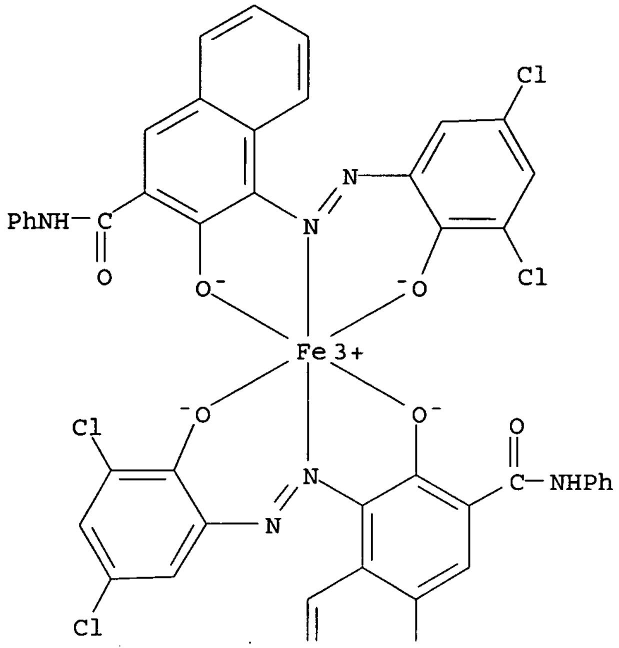


RN 191113-15-2 HCAPLUS

CN Ferrate(1-), bis[4-[[3,5-dichloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]- (9CI) (CA INDEX NAME)

PAGE 1-A



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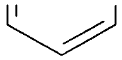
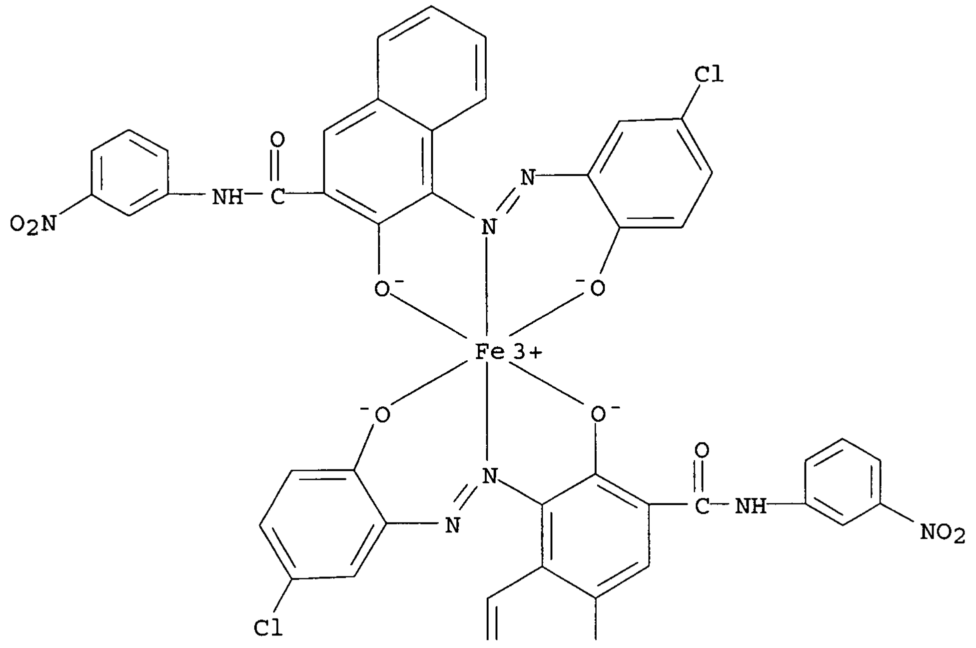


RN 197526-67-3 HCAPLUS

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-(3-nitrophenyl)-2-naphthalenecarboxamidato(2-)]- (9CI) (CA INDEX NAME)

PAGE 1-A



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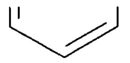


L84 ANSWER 9 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:40287 HCAPLUS
DOCUMENT NUMBER: 138:115005
TITLE: Toners containing specific organic monoazo iron compound and specific binder resin
INVENTOR(S): Iida, Hideto; Kasuya, Takashige; Yusa, Hiroshi; Ogawa, Yoshihiro; Yamazaki, Katsuhisa; Moribe, Shuhei; Tanigawa, Hirohide
PATENT ASSIGNEE(S): Canon Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 36 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003015364	A2	20030117	JP 2001-196519	20010628

PRIORITY APPLN. INFO.: JP 2001-196519 20010628

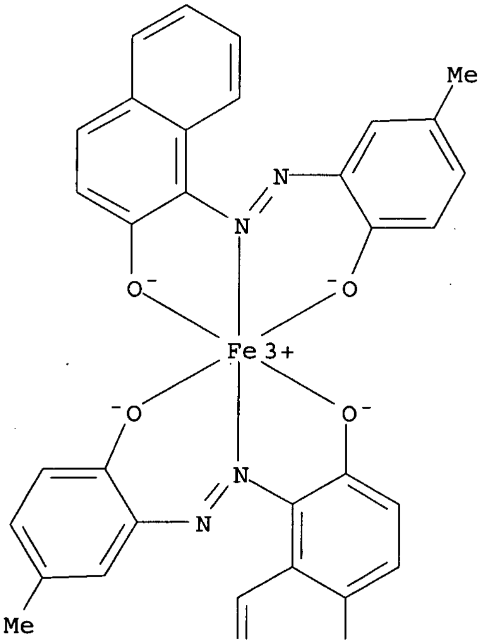
ED Entered STN: 17 Jan 2003

AB The title toner contains a binder resin, a colorant, and an organic monoazo iron compound as a charge-control agent, wherein the organic monoazo iron compound contains an organic monoazo portion having alkyl or carbamoyl substituent and 2 OH groups and wherein the binder resin is chosen from: a mixture of vinyl resin which has repeating unit derived from acrylic acid or methacrylic acid and has 1-100 mg·KOH/g acid value and a vinyl resin having glycidyl group; vinyl resin which has repeating unit derived from acrylic acid or methacrylic acid of 1-100 mg·KOH/g acid value and glycidyl group; and a vinyl resin prepared from the reactions of acrylic acid or methacrylic acid groups and glycidyl groups. The toner provides low temperature image-fixing and good offset resistance, long service-life, and good storageability.

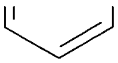
IT **168766-39-0P 268728-80-9P 337369-22-9P**
337369-34-3P 337369-39-8P 486405-71-4P
486405-72-5P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(organic monoazo iron compound; toners containing specific organic metal compound and
specific binder resin)

RN 168766-39-0 HCAPLUS
CN Ferrate(1-), bis[1-[[2-(hydroxy-κO)-5-methylphenyl]azo-κN1]-2-naphthalenolato(2-)-κO]-, sodium (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

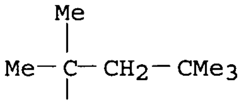


● Na$^+$

RN 268728-80-9 HCAPLUS

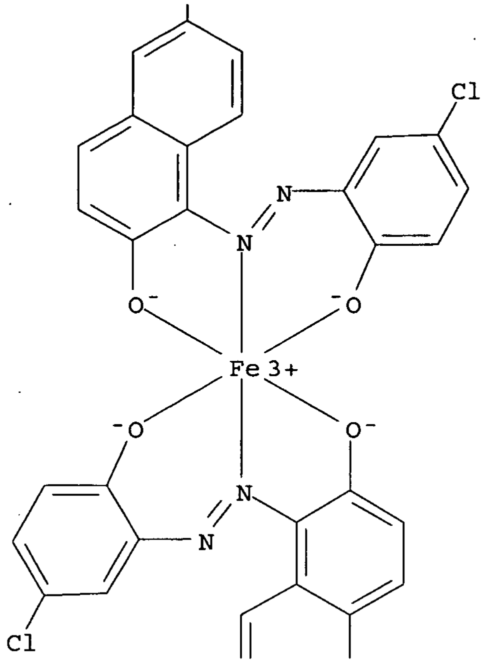
CN Ferrate(1-), bis[1-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-6-(1,1,3,3-tetramethylbutyl)-2-naphthalenolato(2-)-κO]-, sodium (9CI) (CA INDEX NAME)

PAGE 1-A



$$\mathrm{Me-\overset{\overset{Me}{|}}{\underset{|}{C}}-CH_2-CMe_3}$$

PAGE 2-A



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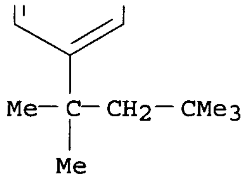
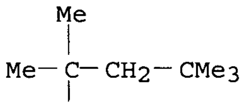


● Na^+

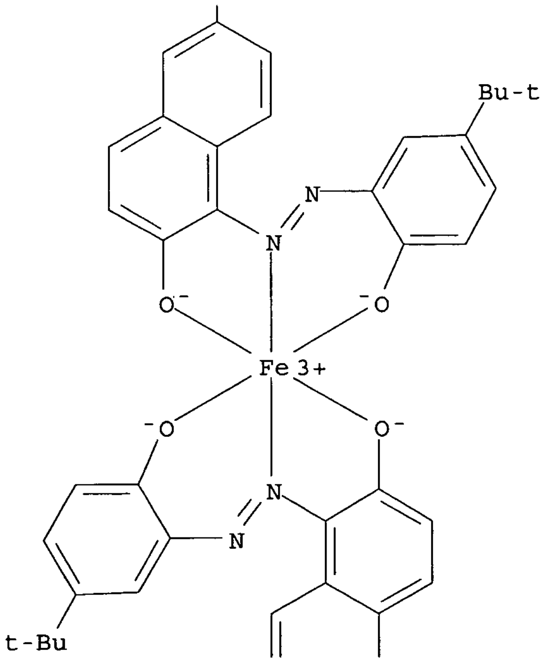
RN 337369-22-9 HCAPLUS
CN Ferrate(1-), bis[1-[[5-(1,1-dimethylethyl)-2-(hydroxy-κO)phenyl]azo-κN1]-6-(1,1,3,3-tetramethylbutyl)-2-naphthalenolato(2-)-κO]-, sodium (9CI) (CA INDEX NAME)

PAGE 1-A

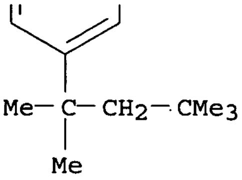


$\mathrm{Me{-}\overset{Me}{\underset{|}{C}}{-}CH_2{-}CMe_3}$

PAGE 2-A



PAGE 3-A



● Na^+

RN 337369-34-3 HCAPLUS
CN Ferrate(1-), bis[1-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-6-methyl-2-naphthalenolato(2-)-κO]-, sodium (9CI) (CA INDEX NAME)

PAGE 1-A

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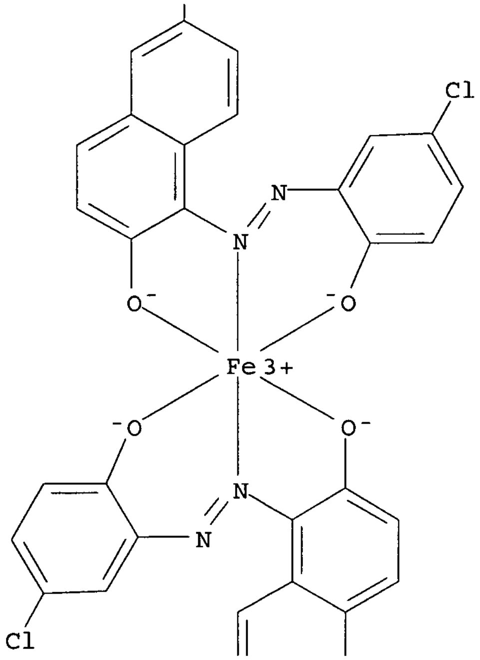

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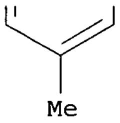
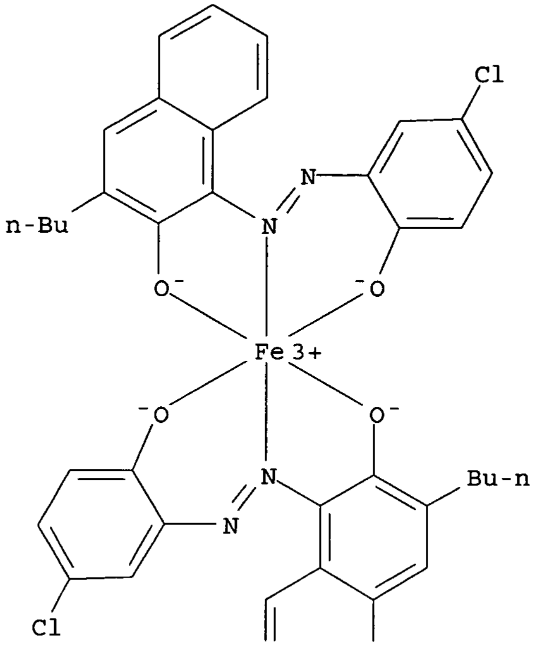


● Na^+

RN 337369-39-8 HCAPLUS
CN Ferrate(1-), bis[3-butyl-1-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-naphthalenolato(2-)-κO]-, sodium (9CI) (CA INDEX NAME)

PAGE 1-A



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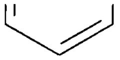
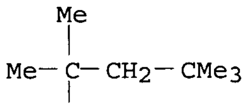


● Na+

RN 486405-71-4 HCAPLUS

CN Ferrate(1-), bis[1-[[2-(hydroxy-κO)phenyl]azo-κN1]-6-(1,1,3,3-tetramethylbutyl)-2-naphthalenolato(2-)-κO]-, potassium (9CI) (CA INDEX NAME)

PAGE 1-A



$\mathrm{Me{-}C(Me)({-})(|){-}CH_2{-}CMe_3}$

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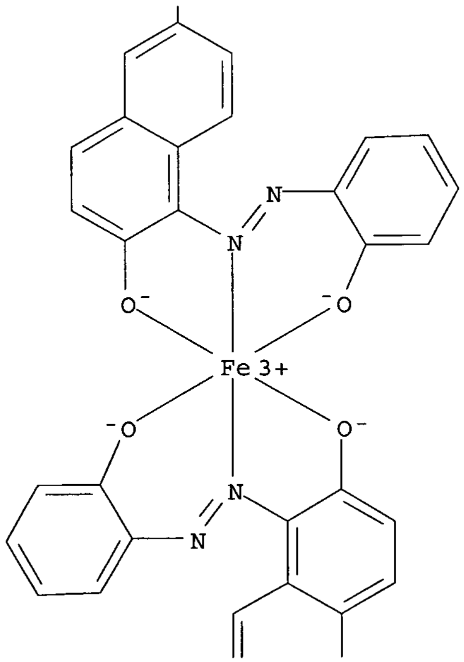

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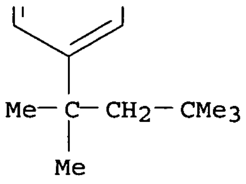
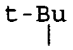


● K+

RN 486405-72-5 HCAPLUS

CN Ferrate(1-), bis[1-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-6-(1,1-dimethylethyl)-2-naphthalenolato(2-)-κO]-, potassium (9CI) (CA INDEX NAME)

PAGE 1-A



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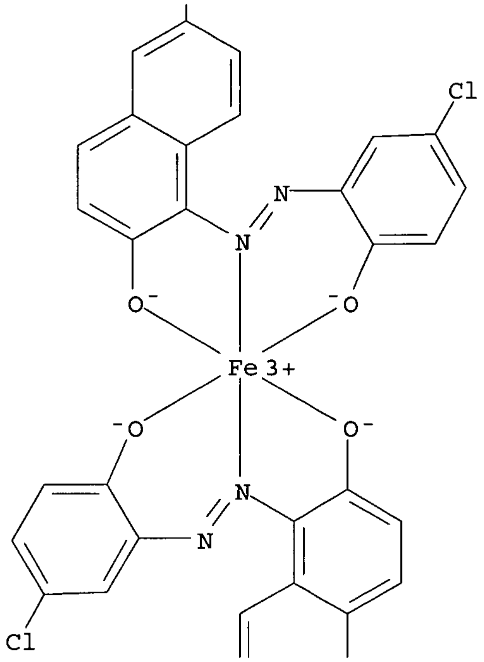
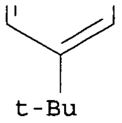


PAGE 3-A



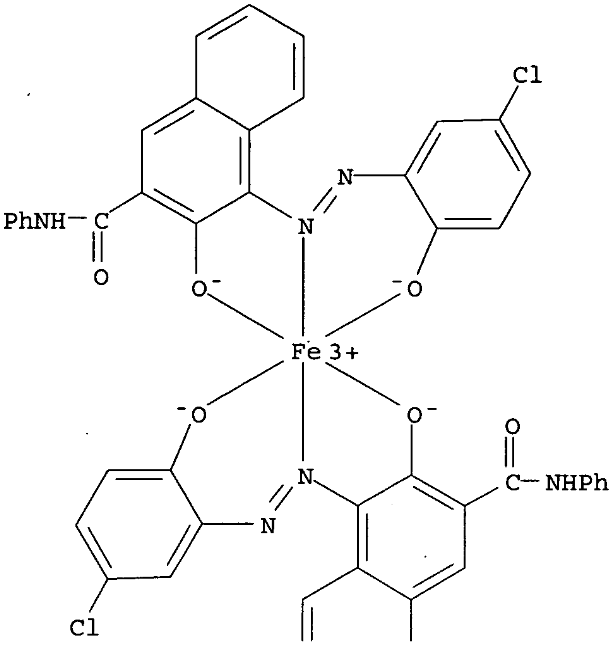
● K+

IT **119029-85-5P**
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(toners containing specific organic metal compound and specific binder resin)

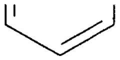
RN 119029-85-5 HCAPLUS

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



● H^+

L84 ANSWER 10 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	2003:17586 HCAPLUS
DOCUMENT NUMBER:	138:80645
TITLE:	Electrophotographic dry toners containing aliphatic polyesters, their manufacture, and image formation method using the toners
INVENTOR(S):	Kawamoto, Keiji; Hashimoto, Akira; Chiba, Takehiko; Kukimoto, Isamu
PATENT ASSIGNEE(S):	Canon Inc., Japan
SOURCE:	Jpn. Kokai Tokkyo Koho, 34 pp. CODEN: JKXXAF
DOCUMENT TYPE:	Patent
LANGUAGE:	Japanese
FAMILY ACC. NUM. COUNT:	1
PATENT INFORMATION:	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

```
     JP 2003005441       A2     20030108    JP 2001-194074          20010627
PRIORITY APPLN. INFO.:                      JP 2001-194074          20010627
OTHER SOURCE(S):             MARPAT 138:80645
```

ED Entered STN: 09 Jan 2003

AB The toners, which show good environmental stability and durability and are free from adhesion to photoreceptor, intermediate transfer belt, fixing unit, etc., contain at least binder resin, colorants, waxes, and polyesters, which comprise aliphatic polybasic carboxylic acids and aliphatic polyhydric alcs. and contain **polymerizable** double bond in the carboxylic acid unit and/or the alc. unit and satisfy the following phys. properties: equivalent circle number average diameter (D1) = 2-10 μm, average circularity 0.950-0.995, and standard deviation of circularity <0.040 in number base equivalent circular diameter-circularity scattergram measured by a flow-type particle image analyzer. The toners may contain azo dye Fe complexes complexes (Markush structure given) as charge control agents. The toners are manufactured by mixing the polyesters shown above, a **polymerizable** vinyl monomer composition, colorants, waxes, and **polymerization** initiator, dispersing the mixture in aqueous medium, and **polymerizing** the vinyl monomers during granulation. Also claimed are electrophotog. image method using the toners.

IT **104815-18-1 163799-98-2**

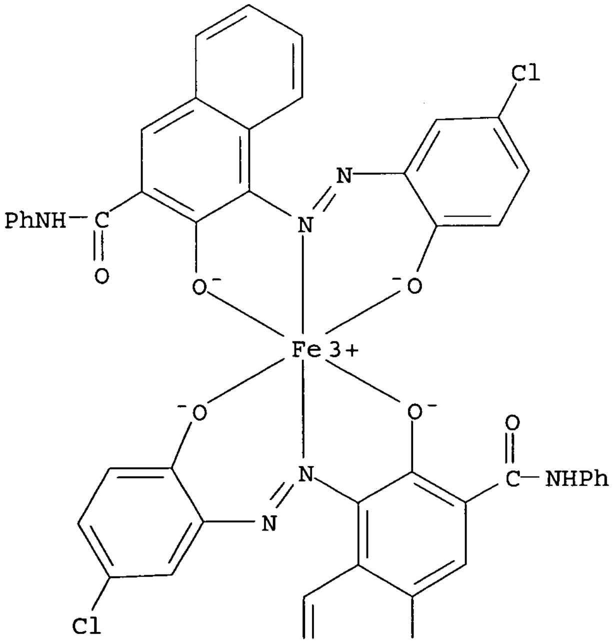
RL: TEM (Technical or engineered material use); USES (Uses)

(neg. charge controlling agent; manufacture of electrophotog. dry toners with controlled size and circularity containing polyesters having **polymerizable** double bonds)

RN 104815-18-1 HCAPLUS

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

PAGE 1-A



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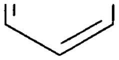
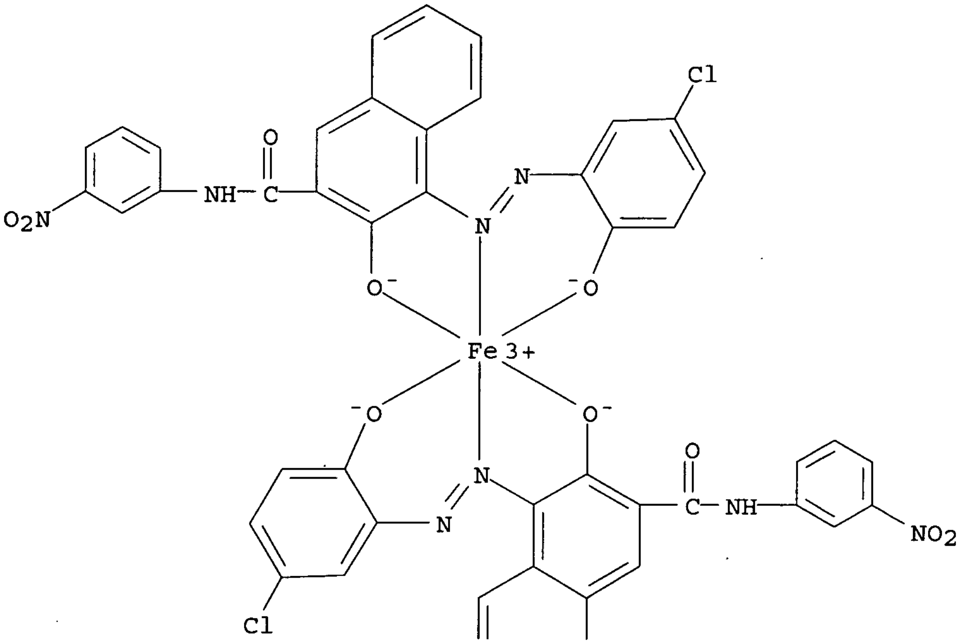


● NH_4^+

RN 163799-98-2 HCAPLUS

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-(3-nitrophenyl)-2-naphthalenecarboxamidato(2-)]-, sodium (9CI) (CA INDEX NAME)

PAGE 1-A



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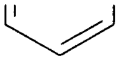

● Na^+

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L84  ANSWER 11 OF 105  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         2002:51308  HCAPLUS
DOCUMENT NUMBER:          136:107591
TITLE:                    Limiting the presence of microorganisms using
                          polymer-bound metal-containing compositions
INVENTOR(S):              Landgrebe, Kevin D.; Hastings, David J.; Smith,
                          Terrance P.; Cuny, Gregory D.; Sengupta, Ashok;
                          Mudalige, Chandrika D.; Brandys, Frank A.
PATENT ASSIGNEE(S):       3M Innovative Properties Company, USA
SOURCE:                   PCT Int. Appl., 37 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.          KIND  DATE        APPLICATION NO.        DATE
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     WO 2002004034        A2   20020117    WO 2001-US20205        20010625
     WO 2002004034        A3   20020530
         W:  AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES,
             FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG,
             KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
             MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ,
             TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ,
             MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     US 6432396           B1   20020813    US 2000-611346         20000706
     EP 1299132           A2   20030409    EP 2001-958835         20010625
     EP 1299132           B1   20040825
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     JP 2004506616        T2   20040304    JP 2002-508488         20010625
     AT 274359            E    20040915    AT 2001-958835         20010625
PRIORITY APPLN. INFO.:                     US 2000-611346      A  20000706
                                           WO 2001-US20205     W  20010625
OTHER SOURCE(S):          MARPAT 136:107591
ED   Entered STN:  18 Jan 2002
AB   The present invention provides a method of limiting the presence of a
     microorganism by contacting the microorganism with polymer-bound
     metal-containing  The compns. include metal-containing compds. that may be
prepared
     by reacting or polymerizing metal-containing monomers.  The microorganism
     may be present in a liquid that is contacted with the polymer
     -bound metal-containing composition  Alternatively, the microorganism may be
     present in a solid that is contacted with the polymer-bound
     metal-containing composition  A metal-containing monomer was prepared by the
reaction of
     2-salicylideneaminophenol, potassium tetrachloroplatinate, and
     4-vinylpyridine.  A polyurethane-bound metal-contg.composition was prepared
using
     above monomer.  Virucidal activity of the above polyurethane was shown
     against equine infectious anemia virus.
IT   147361-10-2P 222989-09-5P
     RL: DEV (Device component use); PRP (Properties); SPN (Synthetic
     preparation); PREP (Preparation); USES (Uses)
        (limiting presence of microorganisms using polymer-bound
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        metal-containing compns.)
RN    147361-10-2  HCAPLUS
CN    Platinum, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](4-
      ethenylpyridine)-, (SP-4-2)- (9CI)  (CA INDEX NAME)
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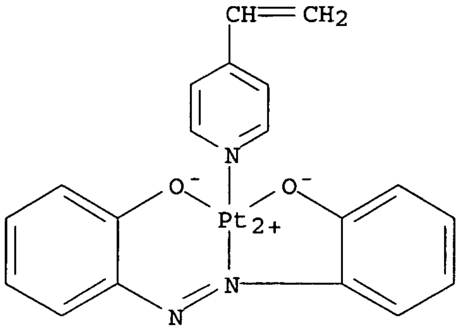

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RN    222989-09-5  HCAPLUS
CN    Platinum, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)](4-
      pyridinemethanol-κN1)-, (SP-4-2)- (9CI)  (CA INDEX NAME)
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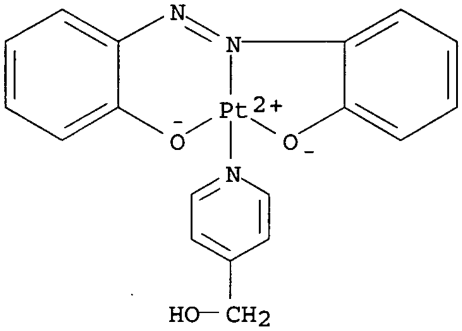

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L84  ANSWER 12 OF 105  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:        2003:80606  HCAPLUS
DOCUMENT NUMBER:         138:90266
TITLE:                   Transition metal complexes of tridentate ligands for
                         olefin polymerization
INVENTOR(S):             Tang, Yong; Sun, Xiuli; Hu, Weiqiu
PATENT ASSIGNEE(S):      Shanghai Inst. of Organic Chemistry, Chinese Academy
                         of Sciences, Peop. Rep. China
SOURCE:                  Faming Zhuanli Shenqing Gongkai Shuomingshu, 59 pp.
                         CODEN: CNXXEV
DOCUMENT TYPE:           Patent
LANGUAGE:                Chinese
FAMILY ACC. NUM. COUNT:  3
PATENT INFORMATION:

     PATENT NO.          KIND    DATE         APPLICATION NO.        DATE
     ---------------     ----    --------     --------------------   --------
     CN 1332182           A      20020123     CN 2001-126323         20010723
     WO 2003010207        A1     20030206     WO 2002-CN425          20020617
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CO,
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             CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM,
             HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,
             LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL,
             PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA,
             UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
             CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     EP 1426385          A1    20040609    EP 2002-754132         20020617
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     US 2005004331       A1    20050106    US 2004-761827         20040121
PRIORITY APPLN. INFO.:                     CN 2001-126323      A  20010723
                                           CN 2002-110844      A  20020209
                                           WO 2002-CN425       W  20020617
```

OTHER SOURCE(S): MARPAT 138:90266

ED Entered STN: 03 Feb 2003

AB A new olefin **polymerization catalyst** comprises Group 3-11 transition metal and tridentate ligands containing N, P and O atoms, which were prepared by condensation of a substituted salicylaldehyde with an phosphine-substituted aniline or amine. Thus, ethylene was **polymd**. in the presence of 2 μmol **catalyst** I (preparation given) and MAO (Al/Ti = 1500) at 50° for 1.5 h to yield 1.8 g polyethylene with Mw 630,000, activity 1.8+106 g PE/mol Ti·h·atm, and polydispersity 1.22.

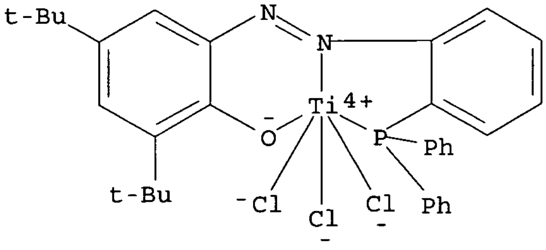
IT **484697-27-0P**

RL: **CAT (Catalyst use)**; IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(olefin **polymerization catalysts** comprising transition metals and tridentate ligands containing O, N or P heteroatoms)

RN 484697-27-0 HCAPLUS

CN Titanium, [2,4-bis(1,1-dimethylethyl)-6-[[2-(diphenylphosphino-κP)phenyl]azo-κN2]phenolato-κO]trichloro- (9CI) (CA INDEX NAME)



L84 ANSWER 13 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:210143 HCAPLUS

DOCUMENT NUMBER: 134:245211

TITLE: Nonmagnetic one-component electrophotographic toner involving negatively chargeable charge controller and ethylene-propylene **copolymer**

INVENTOR(S): Umno, Mikio; Takehara, Ryuji; Senoguchi, Terunori; Owada, Takeshi; Sugihara, Masakazu

PATENT ASSIGNEE(S): Mitsubishi Chemical Corp., Japan

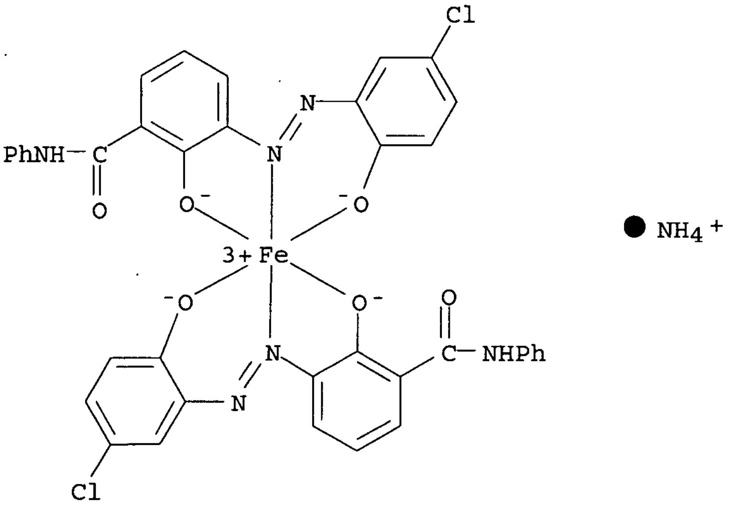
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
JP 2001075312	A2	20010323	JP 1999-283898		19991005
PRIORITY APPLN. INFO.:			JP 1999-192560	A	19990707

OTHER SOURCE(S): MARPAT 134:245211
ED Entered STN: 23 Mar 2001
AB The toner contains a polyester, a colorant, a metal-containing azo-type charge controller, and ethylene-propylene **copolymer** with m.p. 125-140°. The toner containing the neg.-chargeable charge controller and the ethylene-propylene **copolymer** with regulated m.p. shows rapid charge up and offset prevention in small-size printers.
IT **156108-08-6**, T 77
RL: TEM (Technical or engineered material use); USES (Uses)
(T 77; nonmagnetic one-component electrophotog. toner containing polyester, metal azo compound charge controller, and ethylene-propylene **copolymer**)
RN 156108-08-6 HCAPLUS
CN Ferrate(1-), bis[3-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-(hydroxy-κO)-N-phenylbenzamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)



L84 ANSWER 14 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:432997 HCAPLUS
DOCUMENT NUMBER: 135:26876
TITLE: Toner for electrophotography
INVENTOR(S): Okuyama, Hisashi; Horibe, Yasumasa; Suwa, Yoshihito
PATENT ASSIGNEE(S): Tomoegawa Paper Co. Ltd., Japan; Shimadzu Corporation; Toyota Motor Co. Ltd.
SOURCE: Eur. Pat. Appl., 16 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1107069	A1	20010613	EP 2000-311002	20001208
EP 1107069	B1	20040331		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001166537	A2	20010622	JP 1999-352412	19991210
US 2001003636	A1	20010614	US 2000-730736	20001207
US 6432600	B2	20020813		
PRIORITY APPLN. INFO.:			JP 1999-352412	A 19991210

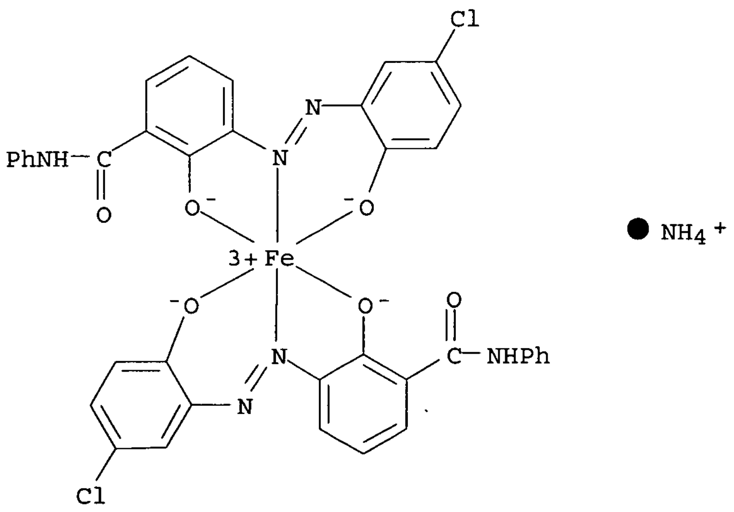
ED Entered STN: 15 Jun 2001

AB The invention relates to a binder resin having high elec. power efficiency and excellent resin strength that may be used for a toner for electrophotog. The toner includes a poly(lactic acid)-type biodegradable resin and a terpene-phenol **copolymer.** The molar concentration of 1 of the L-lactic acid units and D-lactic acid units in a lactic acid component of the poly(lactic acid)-type biodegradable resin is in the range between .apprx.75 mol% and .apprx.98 mol%. The terpene-phenol **copolymer** may include ≥1 composition selected from the group consisting of: (a) cyclic terpene-phenol **copolymer**, prepared by **copolymg.** cyclic terpene and phenol; (b) cyclic terpene/phenol (1:2 molar ratio) addition product, prepared by adding 2 mols. of phenol to 1 mol of cyclic terpene; (c) polycyclic terpene/phenol (1:2 molar ratio) addition product, prepared by a condensation reaction of the cyclic terpene/phenol (1:2 molar ratio) addition product with 1 of aldehyde and ketone; and (d) polycyclic terpene/phenol (1:1 molar ratio) addition product, prepared by a condensation reaction of a cyclic terpene/phenol (1:1 molar ratio) addition product with 1 of aldehyde and ketone. The toner of the invention is applicable to a full-color toner.

IT **156108-08-6**
RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)
(T 77; toner for electrophotog. having poly(lactic acid)-type biodegradable resin and terpene-phenol **polymer**)

RN 156108-08-6 HCAPLUS

CN Ferrate(1-), bis[3-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-(hydroxy-κO)-N-phenylbenzamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L84 ANSWER 15 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:319607 HCAPLUS
DOCUMENT NUMBER: 134:334250
TITLE: Electrophotographic dry toner preparation using dispersion aqueous **polymerization** and image forming method
INVENTOR(S): Komoto, Keiji; Kukimoto, Tsutomu; Chiba, Tatsuhiko; Hashimoto, Akira
PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan
SOURCE: Eur. Pat. Appl., 62 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

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     PATENT NO.          KIND  DATE          APPLICATION NO.        DATE
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     EP 1096324           A1   20010502      EP 2000-123122         20001025
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
     JP 2002196532        A2   20020712      JP 2000-325956         20001025
     US 6635398           B1   20031021      US 2000-695079         20001025
PRIORITY APPLN. INFO.:                       JP 1999-304680      A  19991026
                                             JP 2000-320708      A  20001020
                                             JP 2000-320709      A  20001020
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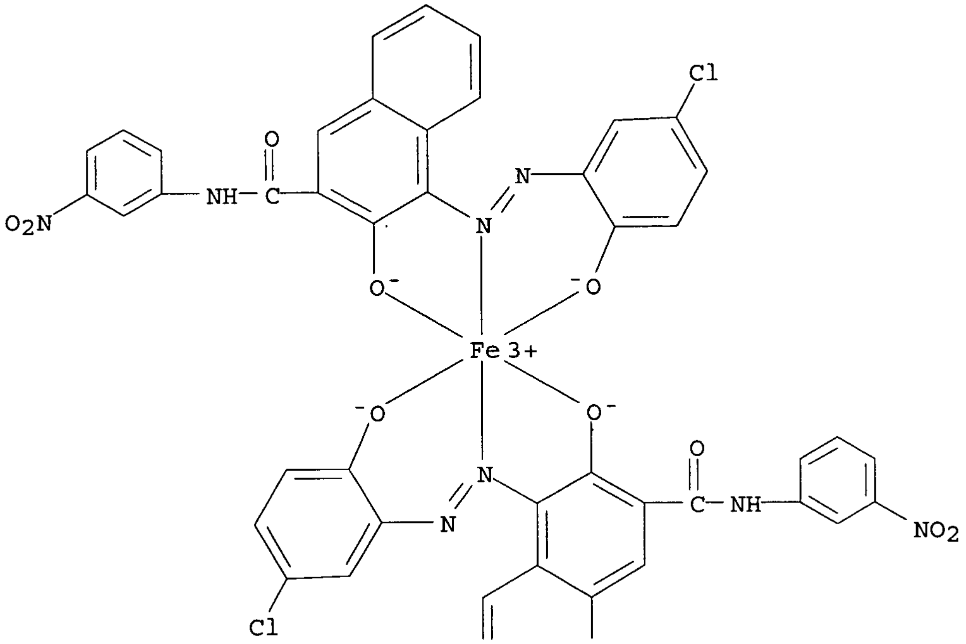
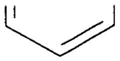
OTHER SOURCE(S): MARPAT 134:334250
ED Entered STN: 04 May 2001
AB A dry toner has toner particles containing at least a binder resin, a colorant and a wax component, and an external additive. The binder resin contains a component derived from a monomer selected from the group consisting of butadiene, isoprene and chloroprene. The toner has a main Tg of from 40°C to 70°C as measured by DSC. When sp. surface area of the toner measured by the BET method at two different conditions: (1) the toner is left for 72 h in an environment of 23°C atmospheric temperature and 65% relative humidity (represented by A (m2/g)), and (2) the toner is left for 72 h in an environment of 50°C atmospheric temperature and 3% relative humidity (represented by B (m2/g)), the toner satisfies the following relationship: $0.8 \leq A \leq 4.0$, $0.80 \leq (B/A) \leq 1.05$. In a toner's number-based circle-corresponding diameter/circularity scatter diagram as measured with a flow type particle image analyzer, the toner has a circle-corresponding number-average particle diameter D1 of from 2 to 10 μm and has an average circularity of from 0.950 to 0.995 and a circularity standard deviation of less than 0.040. The toner has, in its mol.-weight distribution of THF-soluble matter as measured by GPC, a main-peak mol. weight in the region of from 2,000 to 100,000 and contains a THF-insol. matter in an amount of from 5 to 60% by weight The object of the invention is to provide a dry toner having a superior charging stability and fixing performance.
IT **163799-98-2**
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(charge control agent; preparation of electrophotog. dry toner by dispersion **polymerization** using different **polymerization** initiators)
RN 163799-98-2 HCAPLUS

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-(3-nitrophenyl)-2-naphthalenecarboxamidato(2-)]-, sodium (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



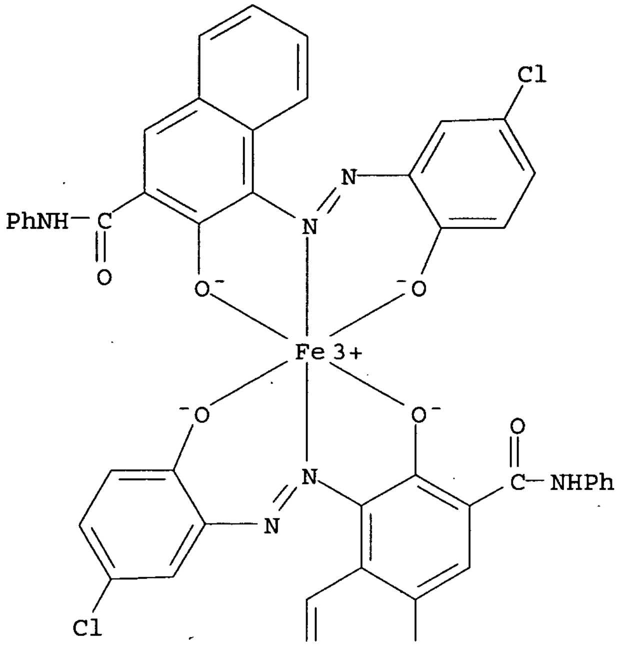
● Na^+

IT **104815-18-1**
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(preparation of electrophotog. dry toner by dispersion **polymerization** using different **polymerization** initiators)

RN 104815-18-1 HCAPLUS

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

PAGE 1-A



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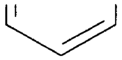


● NH_4^+

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L84 ANSWER 16 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:152663 HCAPLUS
DOCUMENT NUMBER: 132:194841
TITLE: Transition metal compounds and high-activity **catalysts** for **polymerization** of olefins
INVENTOR(S): Nitabaru, Masatoshi; Tsudome, Kazutaka; Matsui, Shigekazu; Fujita, Terunori
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 36 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 2000072810	A2	20000307	JP 1998-242307	19980827
PRIORITY APPLN. INFO.:				JP 1998-242307	19980827

OTHER SOURCE(S): MARPAT 132:194841

ED Entered STN: 08 Mar 2000

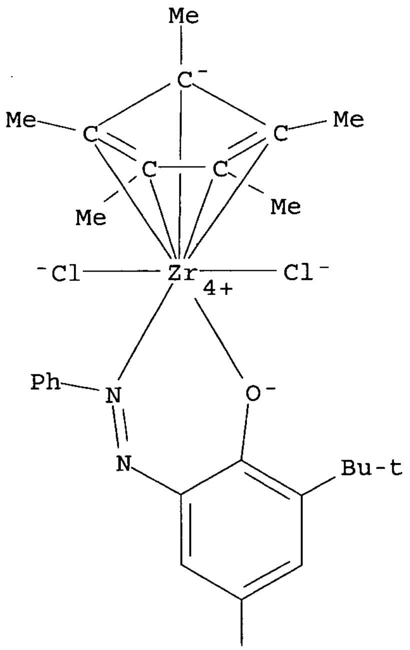
AB The transition metal compds. have (A) cyclopentadienyl-based ligands and (B) ligands selected from R1R2NYCR3:CR4A-, R1N-YCR3:CR4AR6, or R1N-YCR3:CA-R4 (A = O, S, Se, N having R5; R1 and R2 may be substituted by :NRa or :CRbRc; R1-R5, Ra-Rc = H, halo, hydrocarbyl, heterocyclic group, O-, N-, B-, S-, P-, Si-, Ge-, or Sn-containing group; Y = C, N, S, O, B, Si). The **catalysts** contain the metal compds. and ≥ 1 compds. selected from organometallic compds., organic aluminumoxy compds., and compds. forming ion pairs with the metal compds. Thus, aniline and 3-tert-butylsalicylaldehyde were treated and then with cyclopentadienyltitanium trichloride to give a compound Ethylene was **polymerized** in the presence of the compound and Me aluminoxane to give a polyethylene with **polymerization** activity 345 g/mmol Ti-h and intrinsic viscosity 17.5 dL/g.

IT **259855-32-8P**
RL: **CAT (Catalyst use)**; IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(transition metal compds. as high-activity **catalysts** for **polymerization** of olefins)

RN 259855-32-8 HCAPLUS

CN Zirconium, dichloro[2-(1,1-dimethylethyl)-4-methyl-6-(phenylazo-κN2)phenolato-κO][(1,2,3,4,5-η)-1,2,3,4,5-pentamethyl-2,4-cyclopentadien-1-yl]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

L84 ANSWER 17 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:670070 HCAPLUS
DOCUMENT NUMBER: 131:305120
TITLE: Electrophotographic toner comprising crosslinked **polymer** binder
INVENTOR(S): Tyagi, Dinesh; Hadcock, Richard L.
PATENT ASSIGNEE(S): Eastman Kodak Co., USA
SOURCE: U.S., 10 pp., Cont.-in-part of U.S. Ser. No. 657,473, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 5968700	A	19991019	US 1998-16065		19980130
JP 09106104	A2	19970422	JP 1996-196517		19960725
PRIORITY APPLN. INFO.:			US 1995-1632P	P	19950728
			US 1996-657473	B2	19960529

ED Entered STN: 21 Oct 1999

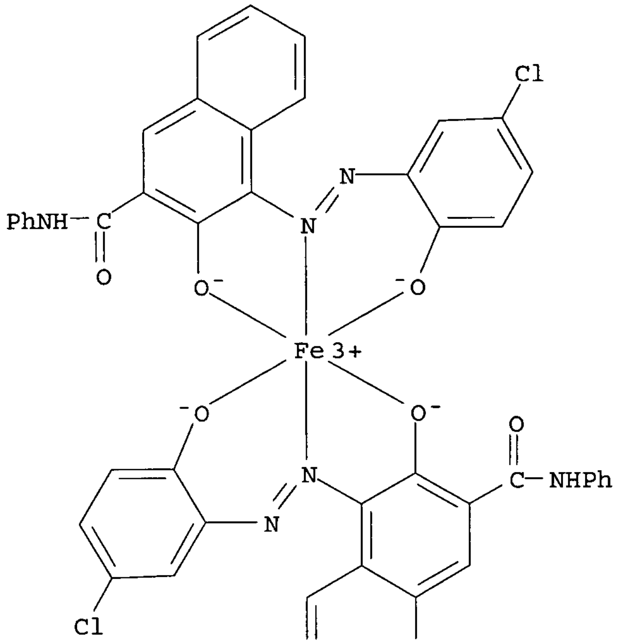
AB There is provided an electrophotog. toner containing a binder comprising (A) a **copolymer** comprising a vinyl aromatic monomer, a monomer selected from the group consisting of (1) conjugated diene monomers and (2) acrylate monomers selected from the group consisting of alkyl acrylate monomers and alkyl methacrylate monomers, and a crosslinking agent or a polyester made from aromatic dicarboxylic acids and one or more aliphatic diols and (B) an alkylsarcosine or a salt thereof having an alkyl group which contains from about 10 to about 20 carbon atoms.

IT **167548-21-2D**, ammonium or hydrogen or sodium salt
RL: TEM (Technical or engineered material use); USES (Uses)
(electrophotog. toners containing alkylsarcosines, crosslinked **polymers** and)

RN 167548-21-2 HCAPLUS

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]- (9CI) (CA INDEX NAME)

PAGE 1-A



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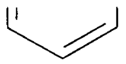


REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L84 ANSWER 18 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:752435 HCAPLUS

DOCUMENT NUMBER: 132:7557

TITLE: Electrostatographic developers containing **polymer**-coated carriers

INVENTOR(S): Tashiro, Hirotaka; Sato, Yukihiro; Kigami, Yoshihiro

PATENT ASSIGNEE(S): Mitsubishi Chemical Industries Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11327215	A2	19991126	JP 1998-140397	19980508

PRIORITY APPLN. INFO.: JP 1998-140397 19980508

OTHER SOURCE(S): MARPAT 132:7557

ED Entered STN: 26 Nov 1999

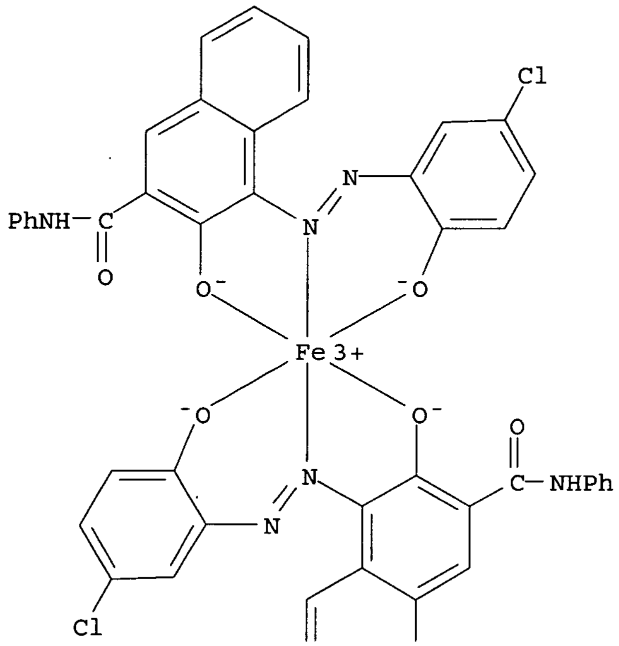
AB The developers, for image formation by using (A) magnet-containing cylindrical developer-transporting materials and (B) cylindrical electrostatic latent image receptors with diameter ≤30 mm, where ratio of peripheral velocity of A to B ≤4, contain carriers coated with materials containing alc. OH group-containing organic **polymers** and silicones. The developers may contain toners comprising styrene **polymers**, coloring agents, and metal complexes of monoazo dyes. The developers show good repeating durability and give high-d. images.

IT **119029-85-5**
RL: TEM (Technical or engineered material use); USES (Uses)
(charge-controlling agents; electrostatog. developers containing carriers coated with hydroxy-containing **polymers** and silicones)

RN 119029-85-5 HCAPLUS

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



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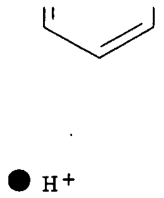


L84 ANSWER 19 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:610697 HCAPLUS

DOCUMENT NUMBER: 131:250442
TITLE: Electrophotographic encapsulated toner for fixing under heat and pressure
INVENTOR(S): Akiyama, Koji; Fukushima, Yoshihiro; Suenaga, Kenichi; Yamaguchi, Koji
PATENT ASSIGNEE(S): Kao Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11258848	A2	19990924	JP 1998-61650	19980312
PRIORITY APPLN. INFO.:			JP 1998-61650	19980312

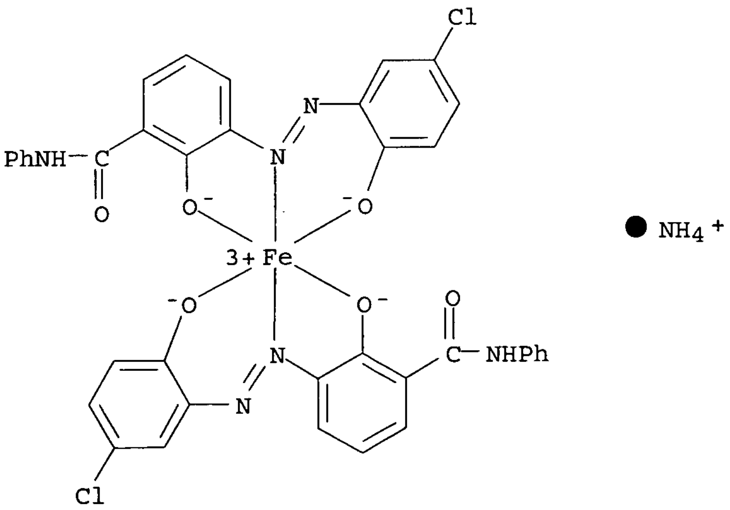
ED Entered STN: 26 Sep 1999

AB The toner comprises at least a hot-melt core material containing a thermoplastic resin encapsulated with a hydrophilic resin and contains 0.5-0.25 weight% (based on the hydrophilic resins) a neg. charge-controlling agent and 0.5-30 weight% (based on the neg. charge-controlling agent) a pos. charge-controlling agent. Alternatively, the toner contains 0.5-25 weight% (based on the hydrophilic resin) the pos. charge-controlling agent and 0.5-30 weight% (based on the pos. charge-controlling agent) neg. charge-controlling agent. The toner shows improved environmental stability.

IT **156108-08-6**, T 77
RL: TEM (Technical or engineered material use); USES (Uses)
(neg. charge-controlling; encapsulated electrophotog. toner comprising hot-melt thermoplastic core and hydrophilic resin capsule with pos. and neg. charge-controlling agent)

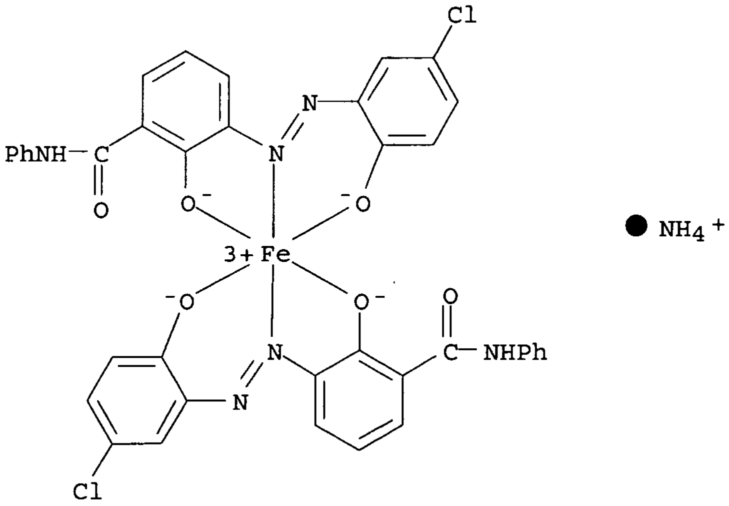
RN 156108-08-6 HCAPLUS

CN Ferrate(1-), bis[3-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-(hydroxy-κO)-N-phenylbenzamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)



L84 ANSWER 20 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:350912 HCAPLUS
DOCUMENT NUMBER: 133:127530
TITLE: TSC measurements on electrophotographic toner layers with charge control agent
AUTHOR(S): Otani, Shinji; Matsumoto, Yuto; Takeuchi, Manabu
CORPORATE SOURCE: Ibaraki University, Ibaraki, Japan
SOURCE: Proceedings - International Symposium on Electrets, 10th, Delphi, Greece, Sept. 22-24, 1999 (1999), 355-358. Editor(s): Konsta, Amalia A.; Vassilikou-Dova, Aglaia; Vartzeli-Nikaki, Kalliopi. Institute of Electrical and Electronics Engineers: New York, N. Y.
CODEN: 69AJAU
DOCUMENT TYPE: Conference
LANGUAGE: English
ED Entered STN: 26 May 2000
AB Thermally stimulated current (TSC) measurements were carried out on **polymers** with several kinds of charge control agent (CCA) to study their charging mechanism. A new peak appeared in the TSC curves for the resin with CCA, which are expected to work as trapping sites for tribocharging. The TSC measurements on the CCA/resin stacked layers suggest that the interface between CCA and resin works as charging sites for tribocharging.
IT **156108-08-6**, Aizen Spilon Black T 77
RL: TEM (Technical or engineered material use); USES (Uses)
(Aizen Spilon Black T 77; charging mechanism of electrophotog. **polymer** toner layers containing charge control agents studied by thermally stimulated current measurements)
RN 156108-08-6 HCAPLUS
CN Ferrate(1-), bis[3-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-(hydroxy-κO)-N-phenylbenzamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L84 ANSWER 21 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:475817 HCAPLUS
DOCUMENT NUMBER: 127:101731

```
TITLE:                   Electrostatographic developer toners
INVENTOR(S):             Kobori, Naokuni; Katada, Masaichiro; Kasuya, Takashige
PATENT ASSIGNEE(S):      Canon K. K., Japan
SOURCE:                  Jpn. Kokai Tokkyo Koho, 26 pp.
                         CODEN: JKXXAF
DOCUMENT TYPE:           Patent
LANGUAGE:                Japanese
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

     PATENT NO.          KIND  DATE        APPLICATION NO.         DATE
     ---------------     ----  --------    --------------------    --------
     JP 09127723          A2   19970516    JP 1995-303385          19951030
PRIORITY APPLN. INFO.:                     JP 1995-303385          19951030
OTHER SOURCE(S):         MARPAT 127:101731
ED   Entered STN:  31 Jul 1997
AB   In the electrostatog. developer toners comprising a polymer
     component, a colorant, a releasing agent, and a charge-controlling agent,
     the releasing agent contains a polyolefin modified by an aromatic vinyl
     monomer and the polymer component satisfies the following: (1)
     it is virtually free of a THF-insol. fraction; (2) the THF-insol. fraction
     has a main mol. weight peak in 3,000-30,000 and a sub-peak or a shoulder in 1
     + 105-3 + 106 in the GPC chromatogram; (3) the polymer
     component with the mol. weight ≥ 1 + 106 occupies 1-20% of the
     total chromatogram area;and (4) the polymer component with the
     mol. weight ≥ 1 + 105 has the acid value of 0.5-20 mgKOH/g.  The
     charge-controlling agent contains an organometallic compound  Use of the
     charge-controlling agent and the polymer component improved
     low-temperature fixability and offset resistance.
IT   104815-18-1
     RL: MOA (Modifier or additive use); USES (Uses)
        (organometallic charge-controlling agent and polymer
        component in electrostatog. developer toners)
RN   104815-18-1  HCAPLUS
CN   Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-
     (hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium
     (9CI)  (CA INDEX NAME)
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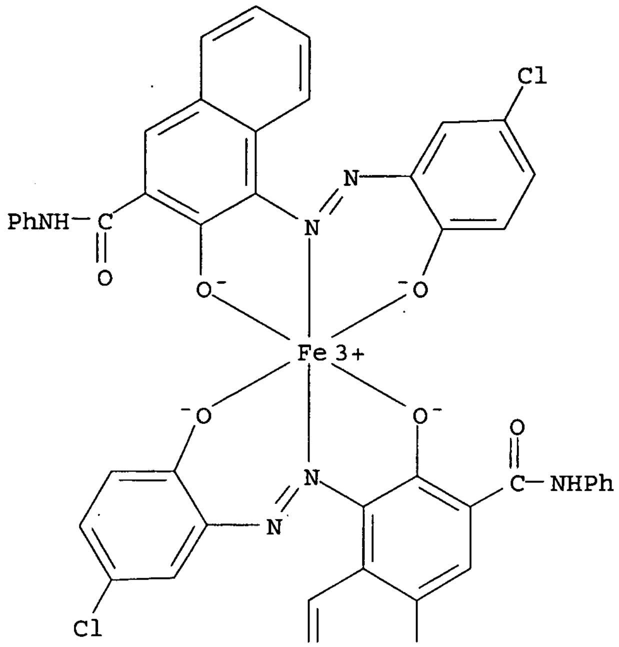

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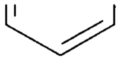

● NH_4^+

L84 ANSWER 22 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:475818 HCAPLUS
DOCUMENT NUMBER: 127:101732
TITLE: Electrostatographic developer toners
INVENTOR(S): Kobori, Naokuni; Kasuya, Takashige; Katada, Masaichiro
PATENT ASSIGNEE(S): Canon K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 29 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09127722	A2	19970516	JP 1995-303310	19951030
JP 3347557	B2	20021120		

PRIORITY APPLN. INFO.: JP 1995-303310 19951030

OTHER SOURCE(S): MARPAT 127:101732
ED Entered STN: 31 Jul 1997
AB In the electrostatog. developer toners comprising a **polymer** component, a colorant, a releasing agent, and a charge-controlling agent, the releasing agent contains a polyolefin modified by an aromatic vinyl monomer, and the **polymer** component satisfies the following: (1) it is virtually free of a THF-insol. fraction; (2) the THF-insol. fraction has a main mol. weight peak in 3,000-30,000 and a sub-peak or a shoulder in 1 + 105-3 + 106 in the GPC chromatogram; and (3) the acid values (Avl and Vvh, resp.) of the low- and high-mol. weight **polymers.** The charge-controlling agent contains an organometallic compound Use of the charge-controlling agent and the **polymer** component improved low-temperature fixability and offset resistance.
IT **104815-18-1**
RL: MOA (Modifier or additive use); USES (Uses)
(organometallic charge-controlling agent and **polymer** component in electrostatog. developer toners)
RN 104815-18-1 HCAPLUS
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

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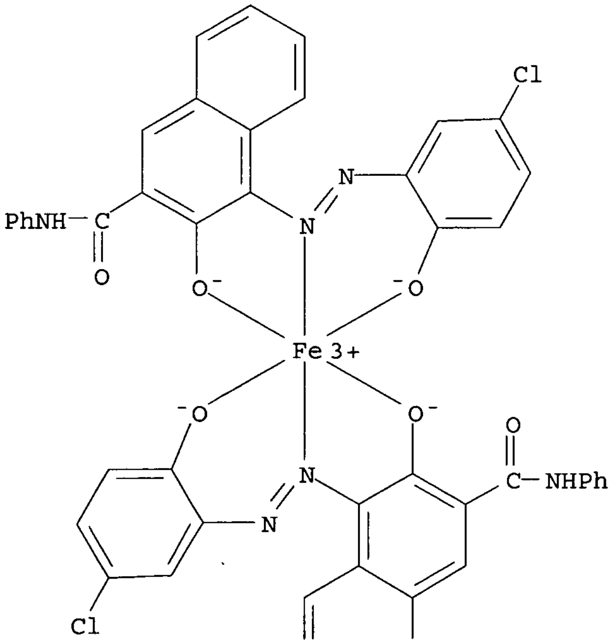

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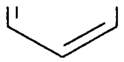

● NH_4^+

L84 ANSWER 23 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:505820 HCAPLUS

DOCUMENT NUMBER: 125:154354

TITLE: Electrophotographic toner containing iron-containing azo dye and styrene **copolymer** as charge controllers and two-component electrophotographic developer containing it

INVENTOR(S): Watanabe, Kazuto; Minamitani, Toshiki

PATENT ASSIGNEE(S): Ricoh Kk, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
JP 08123096	A2	19960517	JP 1995-248581		19950901
JP 3409102	B2	20030526			
US 5597673	A	19970128	US 1995-522929		19950901
PRIORITY APPLN. INFO.:			JP 1994-234325	A	19940902

OTHER SOURCE(S): MARPAT 125:154354

ED Entered STN: 23 Aug 1996

AB The toner comprises a binder resin, a colorant, and a charge controller consisting of (a) an Fe-containing azo dye I (X1, X2 = H, lower alkyl, lower alkoxy, NO2, halo; m, q = 1-2; R1, R3 = H, C1-12 alkyl, alkenyl, sulfonamido, mesyl, SO3H, carboxy ester, OH, C1-12 alkoxy, acetylamino, benzoylamino, halo; n, p = 1-3; R2, R4 = H, NO2; A = H, Na, K, NH4) with surface occurrence 7 + 10-3 - 20 + 10-3 g/g toner and (b) a **copolymer** of a styrene/acrylic monomer and a SO3H-containing acrylamide. The two-component developer consists of the toner and a carrier coated with a silicone resin coating layer containing elec. conductive fine particles and a Si coupling agent. The toner shows good charging property.

IT **104815-18-1**
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(charge controller; two-component electrophotog. developer consisting of toner containing iron-containing azo dye and styrene **copolymer** as charge controllers and silicone-coated carrier)

RN 104815-18-1 HCAPLUS

CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

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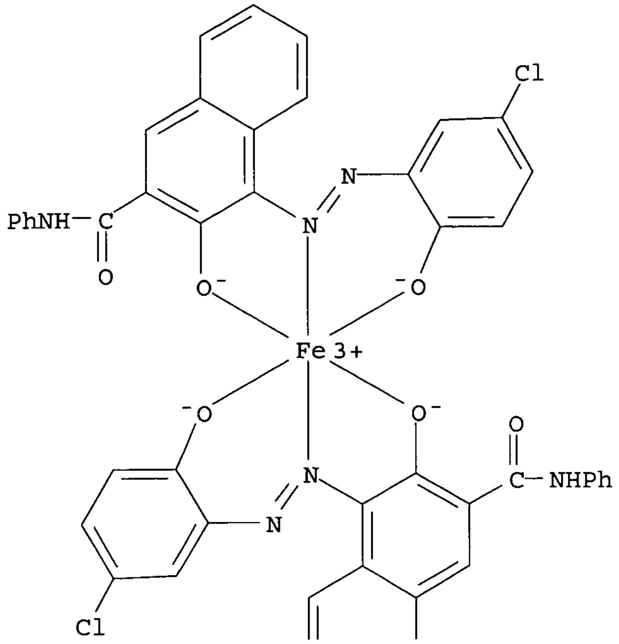

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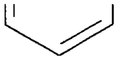


● NH_4^+

L84 ANSWER 24 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:179154 HCAPLUS

DOCUMENT NUMBER: 124:216085

TITLE: Manufacture of electrophotographic toner involving coating of **fluoropolymer** in plasma atmosphere

INVENTOR(S): Suzuki, Takanori; Kurosaki, Masaari

PATENT ASSIGNEE(S): Tomoegawa Paper Co Ltd, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08006291	A2	19960112	JP 1994-156475	19940616

PRIORITY APPLN. INFO.: JP 1994-156475 19940616

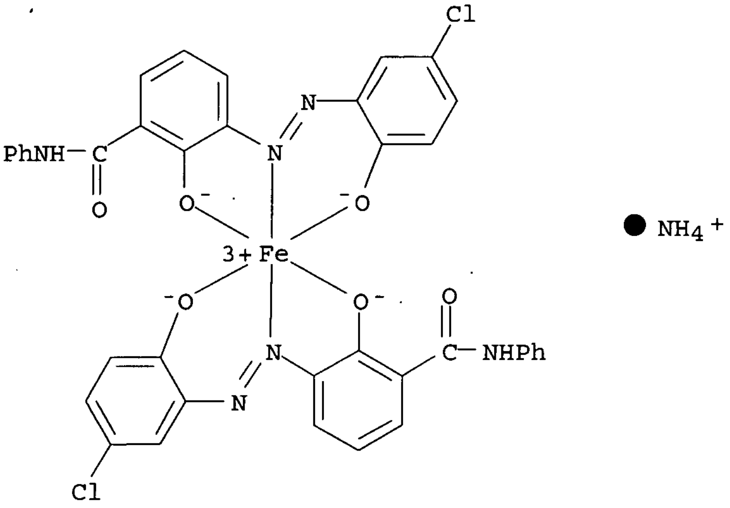
ED Entered STN: 28 Mar 1996

AB The toner is manufactured by producing plasma from a F-containing monomer gas at 5-150W and 2.66-266 Pa, followed by treating toner particles for 10 s-30 min in the plasma atmospheric for application of a plasma-**polymerized** film. The toner shows good heat and moisture resistance.

IT **156108-08-6**, T 77
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(manufacture of electrophotog. toner involving coating of **fluoropolymer** in plasma atmospheric)

RN 156108-08-6 HCAPLUS

CN Ferrate(1-), bis[3-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-(hydroxy-κO)-N-phenylbenzamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)



L84 ANSWER 25 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:986700 HCAPLUS
DOCUMENT NUMBER: 124:131470
TITLE: Heat- and pressure-fixable electrophotographic capsule toner and its manufacture
INVENTOR(S): Sakamoto, Yoshinobu; Asano, Tetsuya; Yamaguchi, Takashi; Kawabe, Kunyasu
PATENT ASSIGNEE(S): Kao Corp, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07248644	A2	19950926	JP 1994-66812	19940309
JP 3219226	B2	20011015		

PRIORITY APPLN. INFO.: JP 1994-66812 19940309
OTHER SOURCE(S): MARPAT 124:131470

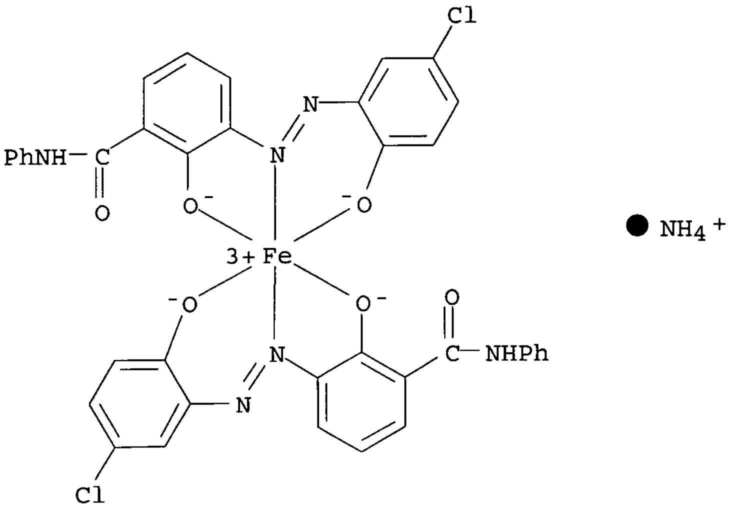
ED Entered STN: 16 Dec 1995

AB In manufacture of the capsule toner comprising a heat-meltable core material containing a thermoplastic resin and a coloring agent coated with a shell, a **polymerizable** composition containing **polymerizable** monomers, a coloring agent, I (M = Fe, Cr; X, Y1, Y2 = ArNHCO, H, Cl, Br, NO2; Z = H, Na, K, NH4, NR4; Ar = Ph which may be substituted for C1-4 alkyl; A = C 1-4 alkyl), and a hydrophilic shell material is suspension-**polymd** . to form a core and a shell. The toner shows good fixability and antioffset and antiblocking properties.

IT **156108-08-6**, T 77
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(manufacture of electrophotog. capsule toner by suspension **polymerization** using charge-controlling agent)

RN 156108-08-6 HCAPLUS

CN Ferrate(1-), bis[3-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-(hydroxy-κO)-N-phenylbenzamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)



L84 ANSWER 26 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:869564 HCAPLUS
DOCUMENT NUMBER: 123:259155
TITLE: Modification of particle surfaces by plasma **polymerized** layers
INVENTOR(S): Suzuki, Takanori; Kurosaki, Masaari
PATENT ASSIGNEE(S): Tomoegawa Paper Co Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07194968	A2	19950801	JP 1994-13196	19940110
JP 3462552	B2	20031105		
PRIORITY APPLN. INFO.:			JP 1994-13196	19940110

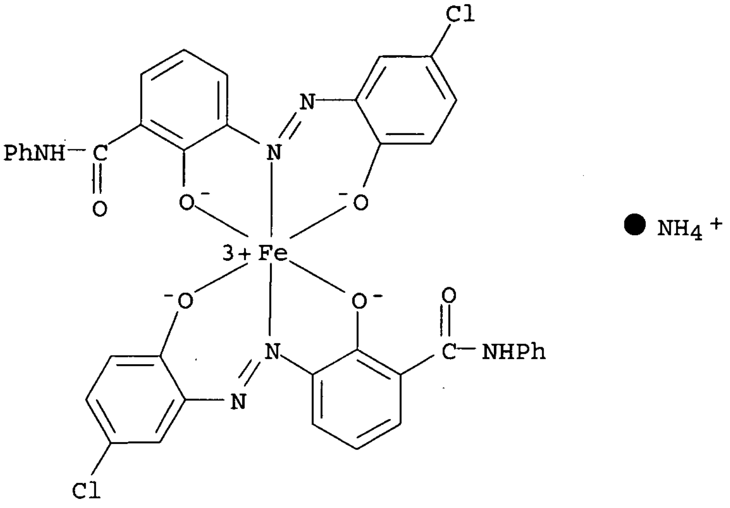
ED Entered STN: 21 Oct 1995

AB The title process, useful for modifying toners or carriers for static copying, powdered magnet, etc., consists of **polymerizing** **polymerizable** monomers (e.g., hexamethyldisiloxane) on the surface of floating and vibrating particles (e.g., of 100:7:4:2 blend of Bu acrylate-styrene **copolymer**, MA-100, Viscol 660P, and T-77) by exposing to plasma.

IT **156108-08-6**, Aizen Spilon Black T-77
RL: MOA (Modifier or additive use); USES (Uses)
(particles containing; modification of particle surfaces by plasma **polymerized** layers)

RN 156108-08-6 HCAPLUS

CN Ferrate(1-), bis[3-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-(hydroxy-κO)-N-phenylbenzamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)



L84 ANSWER 27 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:511630 HCAPLUS
DOCUMENT NUMBER: 121:111630
TITLE: Scale preventive coatings in **polymerization** reactors
INVENTOR(S): Shimizu, Toshihide; Shigemitsu, Minoru
PATENT ASSIGNEE(S): Shin-Etsu Chemical Co., Ltd., Japan
SOURCE: U.S., 8 pp. Cont.-in-part of U.S. Ser. No. 780,281, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 5302639	A	19940412	US 1992-963511		19921020
CA 2050880	AA	19920308	CA 1991-2050880		19910906
PRIORITY APPLN. INFO.:			JP 1990-284559	A	19901023
			US 1991-780281	B2	19911022
			JP 1990-238530	A	19900907

JP 1990-238531 A 19900907

ED Entered STN: 03 Sep 1994

AB A **polymer** scale preventive agent for use in **polymerization** of a monomer having an ethylenic double bond, comprises solvent composition of (A) a N-containing organic compound having at least 5 continuous conjugated π bonds, (B) and anionic organic compound having ≥1 group selected from sulfonic acid group and carboxylic group and having at least 5 continuous conjugated π bonds, and (C) a vinylpyrrolidone-based **polymer.** Deposition of **polymer** scale can be effectively prevented not only in the liquid phase area but also in the vicinity of the interface between the gas and liquid phases. PVC having very few fish eyes was formed after 10 runs using a reactor whose walls were coated with a 60/30/10 composition of Sudan Black B, C.I. Acid Black 2, and poly(vinylpyrrolidone) (mol. weight 40,000).

IT **12392-64-2**, C.I. Acid Blue 161

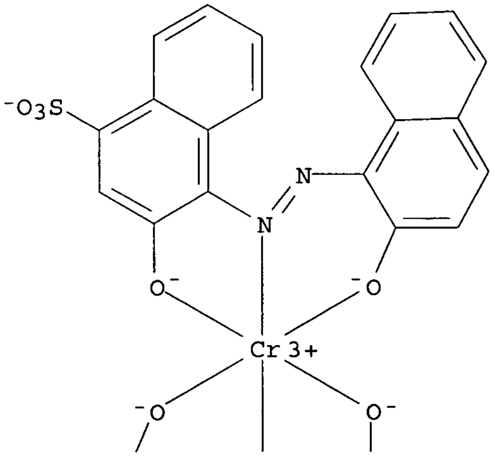
RL: USES (Uses)

(coatings containing, as scale inhibitors in vinyl **polymerization**)

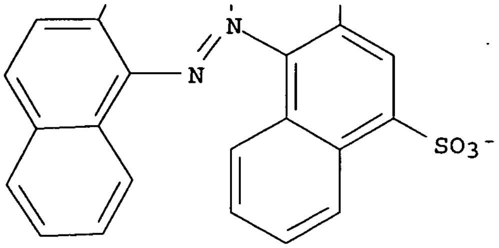
RN 12392-64-2 HCAPLUS

CN Chromate(3-), bis[3-hydroxy-4-[(2-hydroxy-1-naphthalenyl)azo]-1-naphthalenesulfonato(3-)]-, disodium hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



● H^+

●2 Na^+

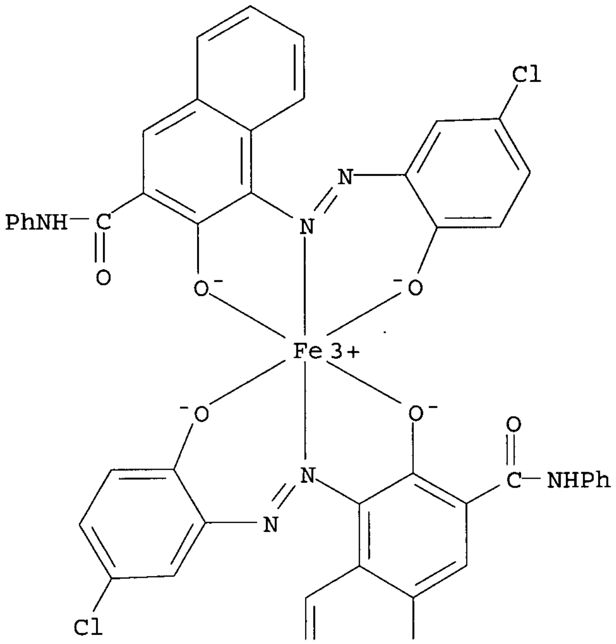
L84 ANSWER 28 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:294790 HCAPLUS
DOCUMENT NUMBER: 122:201180
TITLE: Electrophotographic toner and its manufacture by suspension-**polymerization**
INVENTOR(S): Saito, Jun; Watanabe, Makoto; Kikuchi, Hiromitsu
PATENT ASSIGNEE(S): Nippon Zeon Co, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06282108	A2	19941007	JP 1993-71923	19930330

PRIORITY APPLN. INFO.: JP 1993-71923 19930330
OTHER SOURCE(S): MARPAT 122:201180
ED Entered STN: 14 Jan 1995
AB Manufacture of toners involves dispersing of metal complexes I (X1-2 = H, lower alkyl, lower alkoxy, NO2, halo; m, m1, n, n1 = 1-3; R1-2 = H, C1-12 alkyl, alkenyl, sulfonamido, mesyl, SO3H, carboxy ester, OH, C1-12 alkoxy, NHAc, NHBz, halo; R3-4 = H, NO2; A = H, Na, K, NH4) and a colorant in a vinyl monomer, followed by suspension-**polymerization** in an aqueous dispersing medium in the presence of Ca2+. The toners show quick charging response, uniform charge distribution, and suppressed saturated charged level, and provide fine images without reduction of image d., staining in background, and ghost formation in repeated use.
IT **125304-21-4 161566-08-1**
RL: TEM (Technical or engineered material use); USES (Uses)
(charge-controlling agent; electrophotog. toners from suspension-**polymerization** of dispersion containing metal complex agent and colorant in vinyl monomers in presence of Ca)
RN 125304-21-4 HCAPLUS
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-

(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, sodium (9CI)
(CA INDEX NAME)

PAGE 1-A



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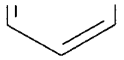
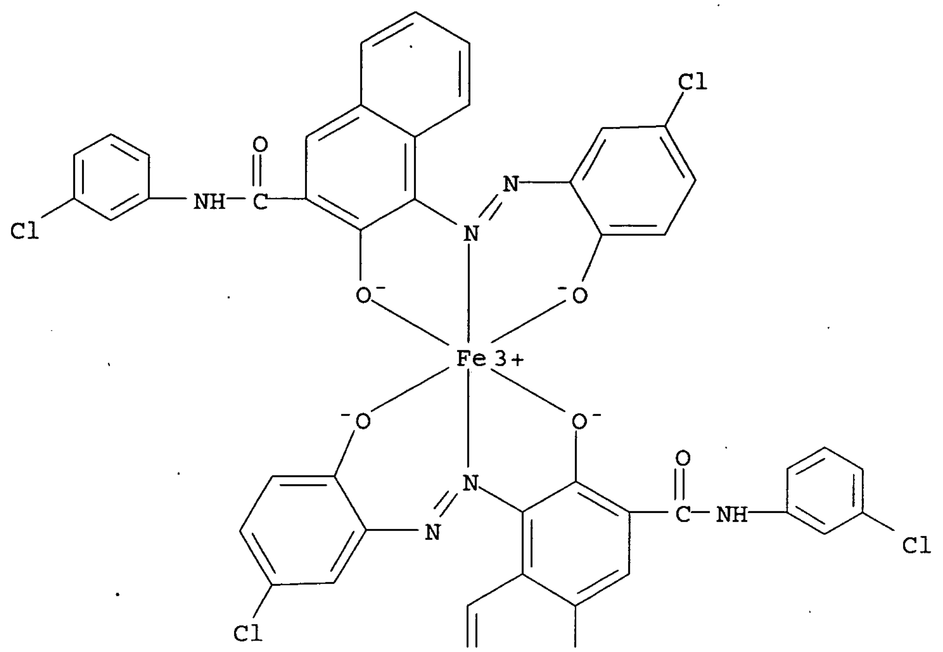


● Na+

RN 161566-08-1 HCAPLUS
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-N-(3-chlorophenyl)-3-(hydroxy-κO)-2-naphthalenecarboxamidato(2-)]-, sodium (9CI) (CA INDEX NAME)

PAGE 1-A



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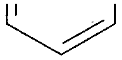

● Na+

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L84  ANSWER 29 OF 105  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         1994:689621  HCAPLUS
DOCUMENT NUMBER:          121:289621
TITLE:                    Manufacture of toners for developing electrostatic
                          latent image
INVENTOR(S):              Nagami, Harusuke; Uchino, Mitsuhiro; Nagase, Takayuki
PATENT ASSIGNEE(S):       Bando Chemical Ind, Japan
SOURCE:                   Jpn. Kokai Tokkyo Koho, 13 pp.
                          CODEN: JKXXAF
DOCUMENT TYPE:            Patent
LANGUAGE:                 Japanese
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.          KIND    DATE        APPLICATION NO.         DATE
     ---------------     ----    --------    --------------------    --------
     JP 06161156          A2     19940607    JP 1992-310524          19921119
PRIORITY APPLN. INFO.:                       JP 1992-310524          19921119
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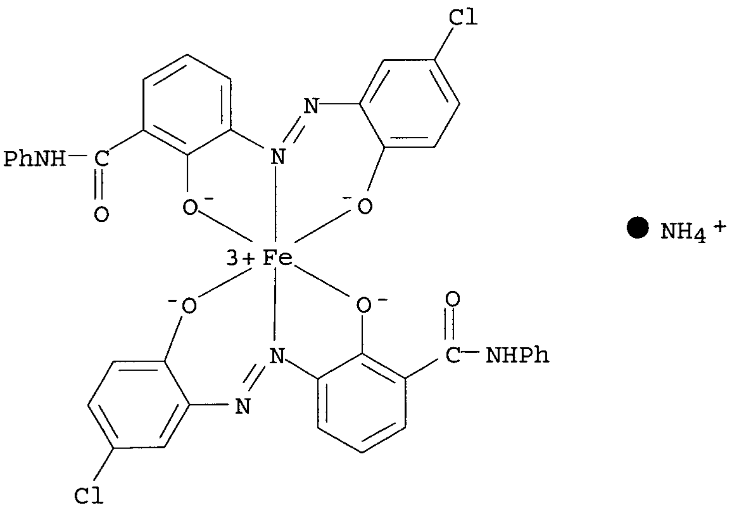
ED Entered STN: 10 Dec 1994

AB The title toners are manufactured by suspension **polymerization** of monomers in which neg. and pos. charge-controlling agents are dispersed, in the presence of a dispersion stabilizer in an aqueous medium. The undesirable emulsion **polymerization** of the monomers is prevented, and the toners with small particle size and controllable and adequate charge are obtained by this method. Thus, a composition containing Spilon Black TRH (neg. charge-controlling agent), Bontron N-07 (pos. charge-controlling agent), styrene, 2-ethylhexyl acrylate, divinylbenzene, C black, and a wax was suspension-**polymerized** in an aqueous medium containing Ca3(PO4)2 to give a toner, which was mixed with SiO2 and a carrier to give a developer.

IT **156108-08-6**, Aizen Spilon Black T 77
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(charge-controlling agent, in suspension **polymerization**, in manufacture of electrophotog. toners)

RN 156108-08-6 HCAPLUS

CN Ferrate(1-), bis[3-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-(hydroxy-κO)-N-phenylbenzamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)



L84 ANSWER 30 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	1994:165260 HCAPLUS
DOCUMENT NUMBER:	120:165260
TITLE:	**Polymerization** apparatus for ethylenic double bond-containing monomers and their **polymerization**
INVENTOR(S):	Amano, Tadashi; Shigemitsu, Minoru; Oonishi, Hideji
PATENT ASSIGNEE(S):	Shinetsu Chemical Industry Co., Ltd., Japan
SOURCE:	Jpn. Kokai Tokkyo Koho, 8 pp. CODEN: JKXXAF
DOCUMENT TYPE:	Patent
LANGUAGE:	Japanese
FAMILY ACC. NUM. COUNT:	1
PATENT INFORMATION:	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

JP 05239108 A2 19930917 JP 1992-78500 19920228
PRIORITY APPLN. INFO.: JP 1992-78500 19920228
ED Entered STN: 02 Apr 1994

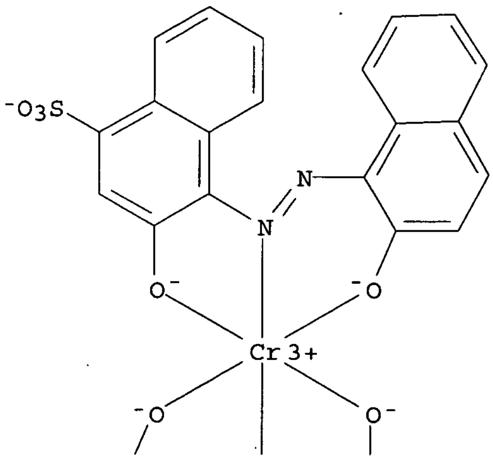
AB The monomers are **polymerized** by using apps. equipped with circulating lines comprising circulating pipes from reactors to heat exchangers, in which pipes are coated inside with (A) N-containing organic compds. with ≥5 continuously connecting conjugated π bonds (X), (B) anionic organic compds. with X and SO3H and/or COOH, and (C) vinylpyrrolidone-based **polymers** for scale prevention. Thus, a stainless steel apparatus was coated inside with Sudan Black B, Acid Black 2, and poly(vinylpyrrolidone), and vinyl chloride was **polymerized** in the apparatus Then, no scale was deposited on the apparatus

IT **12392-64-2**, Acid Blue 161
RL: USES (Uses)
(coatings, containing nitrogen-containing organic compds. and polyvinylpyrrolidone and, on **polymerization** reactors, for scale prevention)

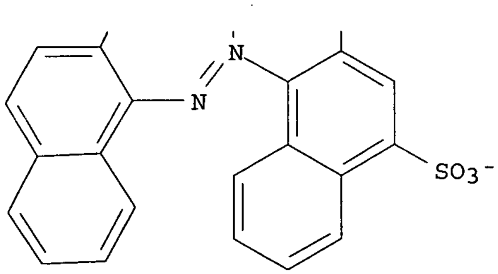
RN 12392-64-2 HCAPLUS

CN Chromate(3-), bis[3-hydroxy-4-[(2-hydroxy-1-naphthalenyl)azo]-1-naphthalenesulfonato(3-)]-, disodium hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



● H^+

●2 Na^+

L84 ANSWER 31 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:55308 HCAPLUS
DOCUMENT NUMBER: 120:55308
TITLE: Preparation of **polymer** particles with narrow particle size distribution by suspension **polymerization**
INVENTOR(S): Kamyama, Masafumi; Maeda, Masahiro
PATENT ASSIGNEE(S): Tomoegawa Paper Co Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05140204	A2	19930608	JP 1991-332729	19911122
PRIORITY APPLN. INFO.:			JP 1991-332729	19911122

ED Entered STN: 05 Feb 1994

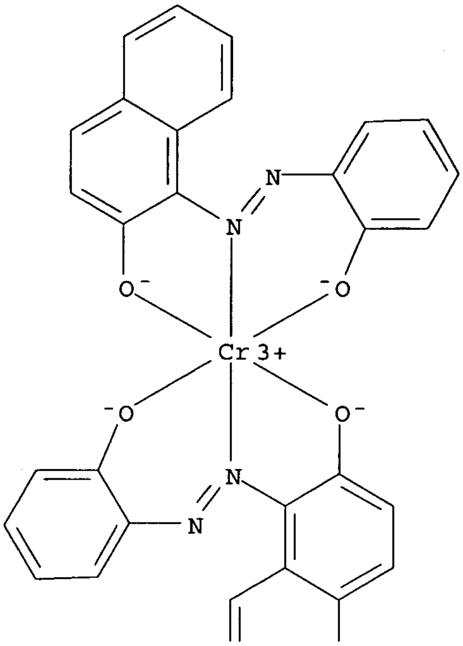
AB The title particles are prepared by forming monomer liquid drops with desired size in an aqueous dispersion containing monomers, water-insol. inorg. particles, and organic **polymerization** inhibitors (e.g. azo dye-metal complexes), then **polymerizing** them. Thus, feeding 4000 g of an aqueous solution containing $Ca_3(PO_4)_2$, Na_2SO_4, Na dodecylbenzenesulfonate and 0.1% I (n = 1, 2), and 1000 g of a dispersion containing styrene 4000, Bu acrylate 1000, AIBN 15, and carbon black 400 g, into a pelletizing apparatus, stirring at 10,000 rpm for 20 min, and heating at 80° and 200 rpm for 8 h gave particles with average particle size 3.73-7.46 µm.

IT **103637-92-9 131768-61-1 152223-65-9**
RL: USES (Uses)
(inhibitors, in suspension **copolymn.** of styrene, for prevention of small emulsion particle formation in)

RN 103637-92-9 HCAPLUS

CN Chromate(1-), bis[1-[(2-hydroxynitrophenyl)azo]-2-naphthalenolato(2-)]-, hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



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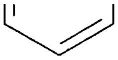
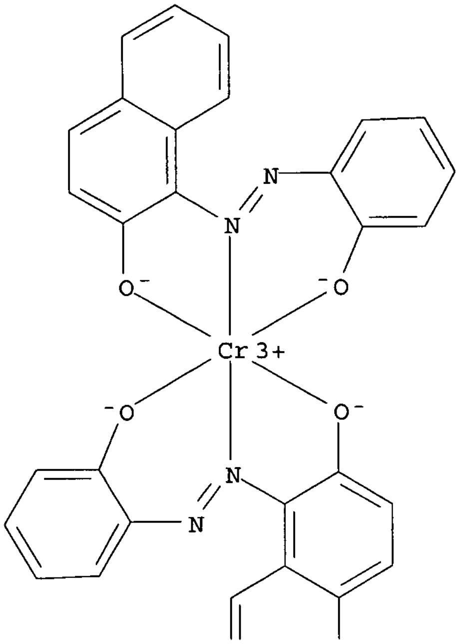


$2\left[\mathrm{D1-NO_2}\right]$

● H^+

RN 131768-61-1 HCAPLUS
CN Chromate(1-), bis[1-[[chloro-2-(hydroxy-κO)phenyl]azo-κN1]-2-naphthalenolato(2-)-κO]-, hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



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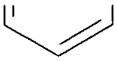
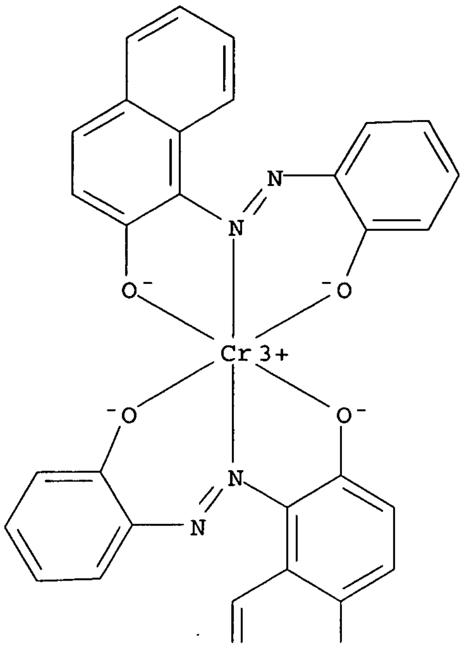


2 (D1—Cl)

● H^+

RN 152223-65-9 HCAPLUS
CN Chromate(1-), bis[1-[(dichloro-2-hydroxyphenyl)azo]-2-naphthalenolato(2-)]-
, hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



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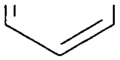


4 (D1—Cl)

● H^+

L84 ANSWER 32 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1993:540034 HCAPLUS
DOCUMENT NUMBER: 119:140034
TITLE: Suspension **polymerization** for **polymer** particles with narrow particle size distribution and without ≤1 μm fine particles
INVENTOR(S): Kamyama, Masafumi; Maeda, Masahiro
PATENT ASSIGNEE(S): Tomoegawa Paper Co Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05093005	A2	19930416	JP 1991-280368	19911002
PRIORITY APPLN. INFO.:			JP 1991-280368	19911002

ED Entered STN: 02 Oct 1993

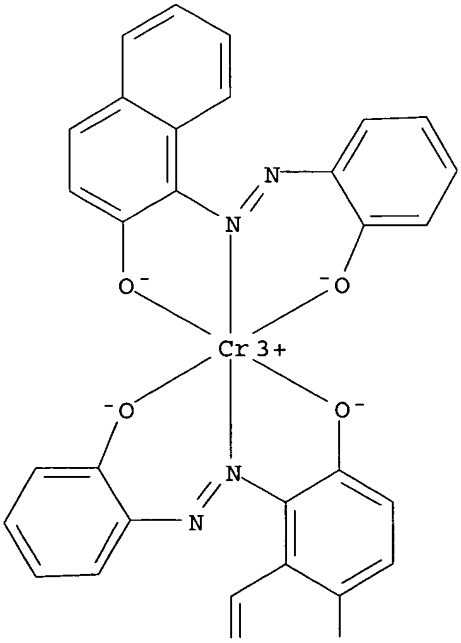
AB Title particles are prepared by keeping a dispersion phase containing **polymerizable** monomers and a continuous phase containing monoazo dye metal complexes I [A, A' = (non)substituted phenylene; B, B' = (non)substituted naphthyl; M = metal; R1-4 = O, NH, O-O] in sep. tanks, supplying both phases ≥1 times to a granulator with controlled ratio through sep. paths to obtain a suspension having **polymerizable** droplets with desired size, and completing the **polymerization** in a **polymerization** tank. Thus, a continuous phase [containing styrene 4000, Bu acrylate 1000, 2,2'-azobisisobutyronitrile 15, and MA 100 (carbon black) 400 g] and a dispersion phase [aqueous solution containing 10% $Ca_3(PO_4)_2$-dispersed H_2O 50, $NaSO_4$ 3, Na dodecylbenzenesulfonate 0.01, and II (mixture of n = 1, 2) 0.1%] were supplied to a granulator at a flow rate of 40 mL/min and 100 mL/min resp., granulator operated at 10,000 rpm, the suspension delivered to a **polymerization** tank, and treated for 8 h to give **polymer** particles showing narrow particle size distribution (1.69-22.39 μm).

IT **38832-99-4D**, chloro derivs. **103637-92-9**
RL: USES (Uses)
(preparation of **polymer** particles in presence of, for narrow distribution)

RN 38832-99-4 HCAPLUS

CN Chromate(1-), bis[1-[(2-hydroxyphenyl)azo]-2-naphthalenolato(2-)]-, hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



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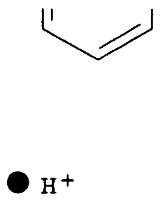
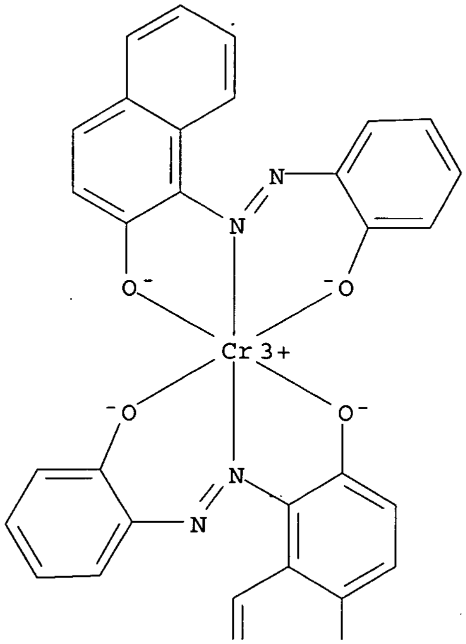


RN 103637-92-9 HCAPLUS
CN Chromate(1-), bis[1-[(2-hydroxynitrophenyl)azo]-2-naphthalenolato(2-)]-, hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



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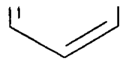


$2 \left[\mathrm{D1{-}NO_2} \right]$

● H^+

L84 ANSWER 33 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1994:284929 HCAPLUS

DOCUMENT NUMBER: 120:284929

TITLE: Suspension **polymerization** method and toner for electrophotography obtained therewith

INVENTOR(S): Kamiyama, Masafumi; Maeda, Masahiro; Totsuka, Hiroki; Sano, Akihiro; Matsushita, Toshiya

PATENT ASSIGNEE(S): Tomoegawa Paper Co., Ltd., Japan

SOURCE: Eur. Pat. Appl., 24 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
EP 561574	A1	19930922	EP 1993-301918		19930312
EP 561574	B1	19970514			
R: DE, FR, GB					
JP 06128304	A2	19940510	JP 1992-91566		19920318
JP 3248747	B2	20020121			
JP 06128305	A2	19940510	JP 1992-91567		19920318
JP 06128306	A2	19940510	JP 1992-91570		19920318
JP 06157619	A2	19940607	JP 1992-91568		19920318
JP 3248748	B2	20020121			
JP 06184209	A2	19940705	JP 1992-91565		19920318
JP 06256406	A2	19940913	JP 1992-91569		19920318
US 5346798	A	19940913	US 1993-30652		19930312
PRIORITY APPLN. INFO.:			JP 1992-91565	A	19920318
			JP 1992-91566	A	19920318
			JP 1992-91567	A	19920318
			JP 1992-91568	A	19920318
			JP 1992-91569	A	19920318
			JP 1992-91570	A	19920318

OTHER SOURCE(S): MARPAT 120:284929

ED Entered STN: 28 May 1994

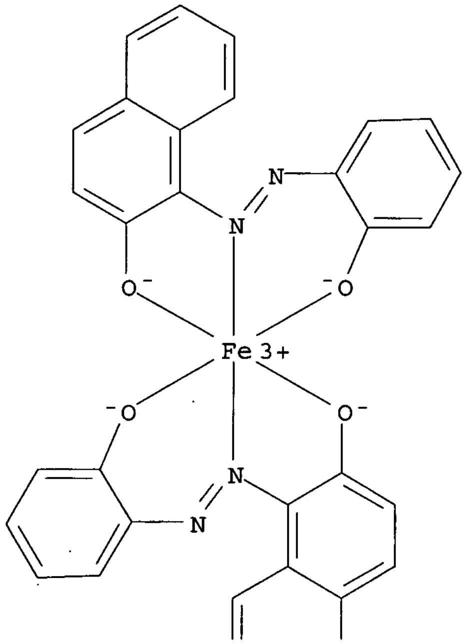
AB The present invention provides a suspension **polymerization** method which provides **polymerized** particles exhibiting excellent charging particles and a toner composed of the **polymerized** particles obtained with the method. The method includes the steps of: placing a continuous phase component of an aqueous medium in a continuous phase vessel and placing a dispersed phase component composed of a monomer composition and at least one solid compound having a specific structure in a dispersed vessel; continuously and simultaneously supplying each of the dispersed phase component and the continuous phase component to an apparatus for providing a shear force; exerting a shear force on the dispersed phase component and the continuous component to form a suspension material including **polymerizable** liquid drops of a desired size; leading the suspension material to a **polymerization** vessel; subjecting the suspension material in the **polymerization** vessel to a **polymerization** reaction to form a **polymerized** material; and drying the **polymerized** material to obtain **polymerized** particles.

IT **154791-23-8P**
RL: PREP (Preparation)
(electrophotog. toners containing **polymer** binders and, preparation of, by suspension **polymerization**)

RN 154791-23-8 HCAPLUS

CN Ferrate(1-), [1-[(dichloro-2-hydroxyphenyl)azo]-2-naphthalenolato(2-)]-, hydrogen (9CI) (CA INDEX NAME)

PAGE 1-A



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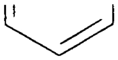


$4 [D1-Cl^-]$

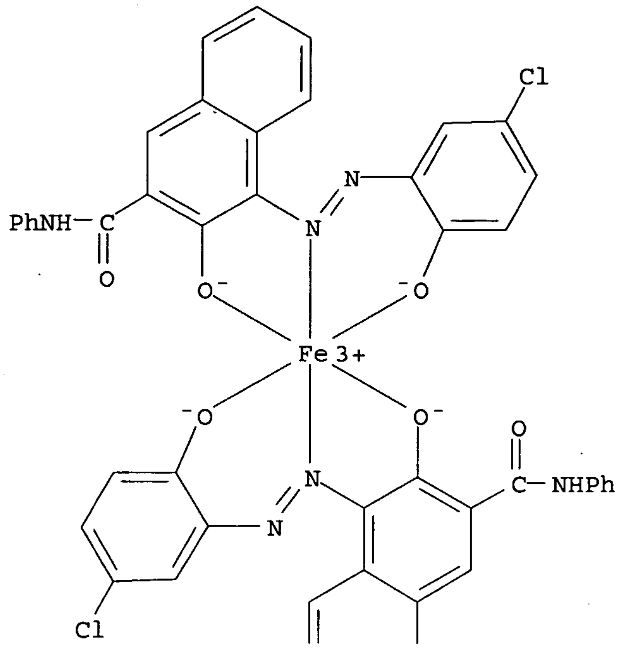
● H^+

L84 ANSWER 34 OF 105 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1993:482832 HCAPLUS
DOCUMENT NUMBER: 119:82832
TITLE: Dry electrophotographic toner using metal-containing azo dyes
INVENTOR(S): Fushimi, Hiroyuki
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04308858	A2	19921030	JP 1991-138529	19910405

PRIORITY APPLN. INFO.: JP 1991-138529 19910405
OTHER SOURCE(S): MARPAT 119:82832
ED Entered STN: 21 Aug 1993
AB A dry electrophotog. toner comprises **polymer** particles of uniform grain size which are prepared in a hydrophilic organic solvent by dispersion-crystallization **polymerization** using a **polymer** dispersant soluble in the hydrophilic organic solvent, wherein metal-containing azo dyes (I; M = Cr, Fe; X = H, NO2; Y = NO2, Cl; A = H, NH4), (II; X, Y = H, Cl,NO2; A = H, Na, NH4), and (III; X, Y = H, NO2; A = H, Na, K, NH4) are dyed or absorbed in the **polymer** grains in an hydrophilic organic solvent. Preferably the **polymer** grains are further subjected to mech. impact to adhere the absorbed metal-containing dyes to the surface of the **polymer** grains. The metal-containing azo dyes serve as neg. charge controlling agents and the electrophotog. toner provides high image quality and high resolution
IT **104815-18-1**
RL: USES (Uses)
(charge-controlling agent, **polymer** particles containing, electrophotog. toner using)
RN 104815-18-1 HCAPLUS
CN Ferrate(1-), bis[4-[[5-chloro-2-(hydroxy-κO)phenyl]azo-κN1]-3-(hydroxy-κO)-N-phenyl-2-naphthalenecarboxamidato(2-)]-, ammonium (9CI) (CA INDEX NAME)

PAGE 1-A



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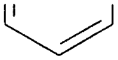

● NH_4^+

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L84  ANSWER 35 OF 105  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         1993:214882  HCAPLUS
DOCUMENT NUMBER:          118:214882
TITLE:                    Polymerizable metal-complexed azo and
                          azomethine dyes and their polymers
INVENTOR(S):              Smith, Terrance P.; Macomber, David W.; Elmasry,
                          Mohammed A.
PATENT ASSIGNEE(S):       Minnesota Mining and Manufacturing Co., USA
SOURCE:                   Eur. Pat. Appl., 19 pp.
                          CODEN: EPXXDW
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE       APPLICATION NO.        DATE
     ---------------     ----   --------   --------------------   --------
     EP 503780            A1    19920916   EP 1992-301380         19920219
     EP 503780            B1    19970108
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R: BE, CH, DE, FR, GB, IT, LI

US 5166326	A	19921124	US 1991-667658	19910311
CA 2061356	AA	19920912	CA 1992-2061356	19920217
JP 04345668	A2	19921201	JP 1992-37545	19920225
JP 08032835	B4	19960329		
KR 197318	B1	19990615	KR 1992-3939	19920310

PRIORITY APPLN. INFO.: US 1991-667658 A 19910311

OTHER SOURCE(S): MARPAT 118:214882

ED Entered STN: 29 May 1993

AB The dyes, which consist of a transition metal with coordination number $\geq$4 bonded to a chromophoric azo or azomethine group and sep. to a **polymerizable** N- or P-containing group, are capable of being mordanted by **polymerization** Thus, 2,2'-dihydroxyazobenzene, $NiCl_2.6H_2O$, and NaOEt were stirred 3 h in EtOH and treated with 4-vinylpyridine to give a **polymerizable** azo dye (I) with λmax 508 nm in acetone. **Polymerization** of 1.0 g I with 5.0 g Me methacrylate gave a **polymer** of mol. weight 17,000 with the same λmaximum

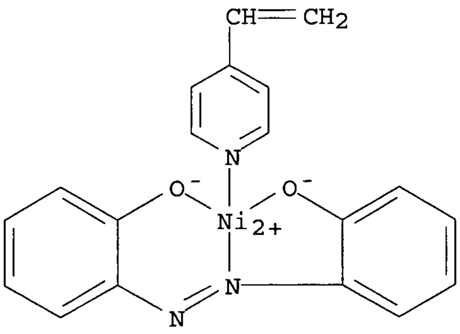
IT **147044-73-3P 147044-75-5P 147044-77-7P**
147469-43-0P
RL: IMF (Industrial manufacture); PREP (Preparation)
(preparation of colored)

RN 147044-73-3 HCAPLUS

CN Nickel, [[2,2'-azobis[phenolato]](2-)-N,O,O'](4-ethenylpyridine)-, polymer with methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

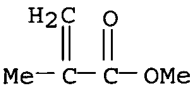
CM 1

CRN 147044-72-2
CMF $C_{19} H_{15} N_3 Ni O_2$
CCI CCS



CM 2

CRN 80-62-6
CMF $C_5 H_8 O_2$



$$\mathrm{Me{-}\overset{\overset{\displaystyle H_2C}{\|}}{C}{-}\overset{\overset{\displaystyle O}{\|}}{C}{-}OMe}$$

RN 147044-75-5 HCAPLUS

CN Nickel, (4-ethenylpyridine)[1-[(2-hydroxyphenyl)azo]-2-naphthalenolato(2-